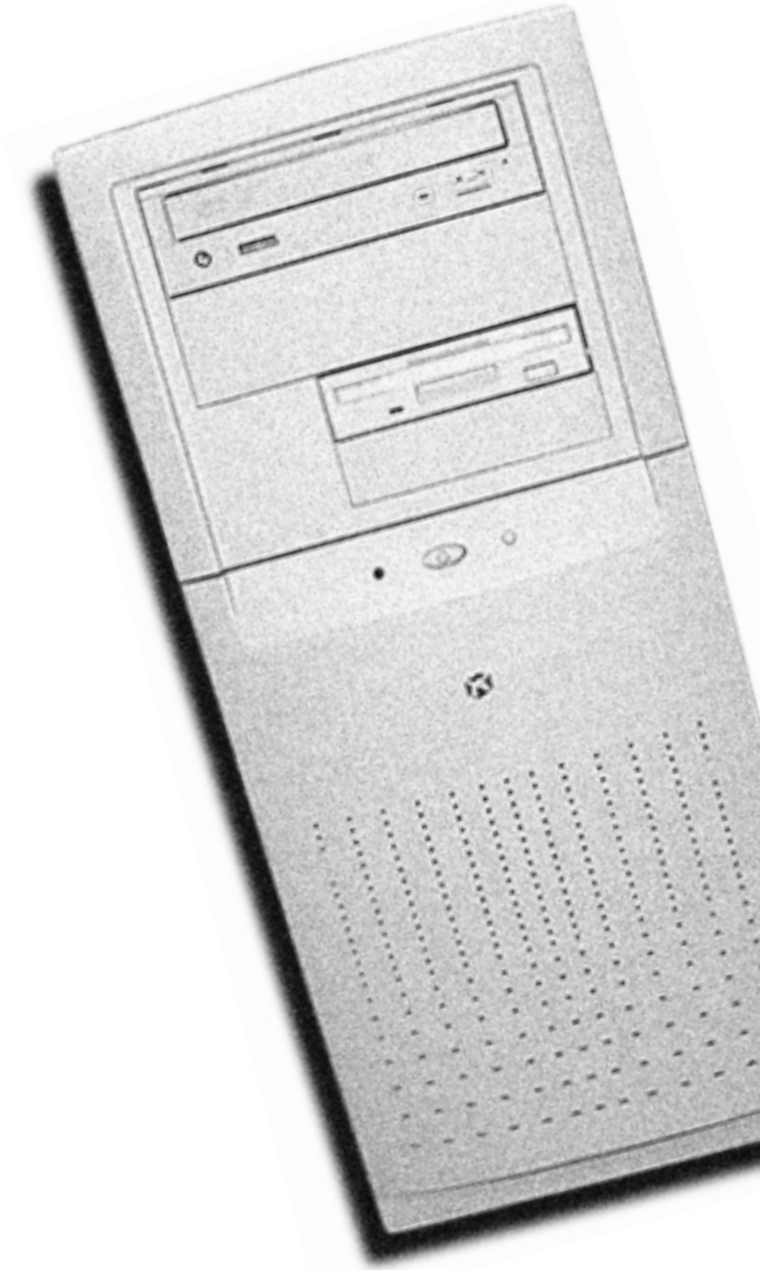
Gateway

Gateway™



E1400 Mid Tower System Manual

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Preface

Conventions used in this manual

Throughout this manual, you will see the following conventions:

Convention	Description
ENTER	Keyboard key names are printed in small capitals.
CTRL+ALT+DEL	A plus sign means to press the keys at the same time.
Setup	Commands to be entered, options to select, and messages that appear on your monitor are printed in bold.
User's Guide	Names of publications are printed in italic.

Important

A note labeled important informs you of special circumstances.

Caution

A caution warns you of possible damage to equipment or loss of data.

Warning

A warning indicates the possibility of personal injury.

Getting additional information

Log on to the Gateway Support Center at **www.gateway.com/support** to find information about your system or other Gateway products. Some types of information you can access are:

- Hardware driver and program updates
- Technical tips
- Service agreement information
- Technical documents and component information
- Frequently asked questions (FAQ)
- Documentation for peripherals or optional components
- Online access to technical support

System Features

1

Easy to service chassis

The E1400 Mid Tower has many features that let you easily access the inside of your system to add and remove components, such as hard drives, memory, and processors.

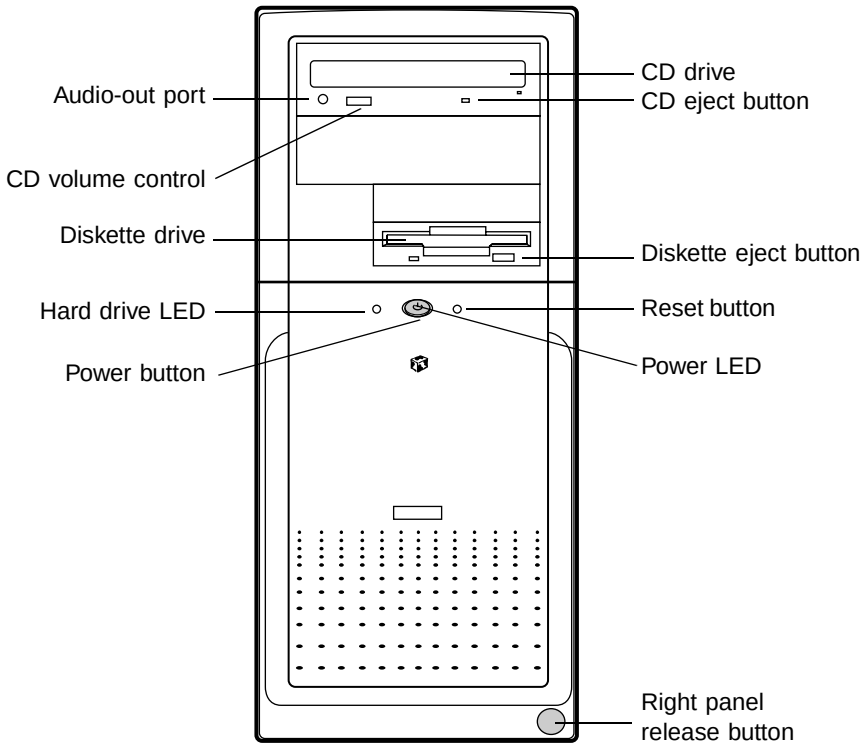
Standard features

The following features are standard in the E1400 Mid Tower system:

- Intel® Celeron™ and Pentium III™ (FC-PGA 370) processors with 128K and 256K of integrated L2 cache, respectively
- Two DIMM sockets that support up to 512 megabytes (MB) of Synchronous Dynamic Random Access Memory (SDRAM)
- Intel 810 chipset
- Integrated Heceta IV Hardware Management Application Specific Integrated Circuit (ASIC)
- Five PCI slots
- One 1.44 MB 3.5-inch diskette drive, one CD drive, and one hard drive
- Keyboard port, mouse port, serial port, parallel port, video port, two Universal Serial Bus (USB) ports, RJ-45 Ethernet port, and audio line-out and audio line-in ports
- 200-watt power supply

Front panel

The front panel contains following features:



Audio-out port connects headphones or powered speakers that let you listen to an audio CD (directly from the CD drive).

CD drive plays data or audio CDs.

CD eject button ejects a CD from the CD drive.

CD volume control controls the volume of an audio CD.

Diskette drive writes to and reads from 3.5-inch, 1.44 MB diskettes.

Diskette eject button ejects diskettes from the diskette drive.

Hard drive LED lights when the hard drive is active.

Power button turns the computer on and off.

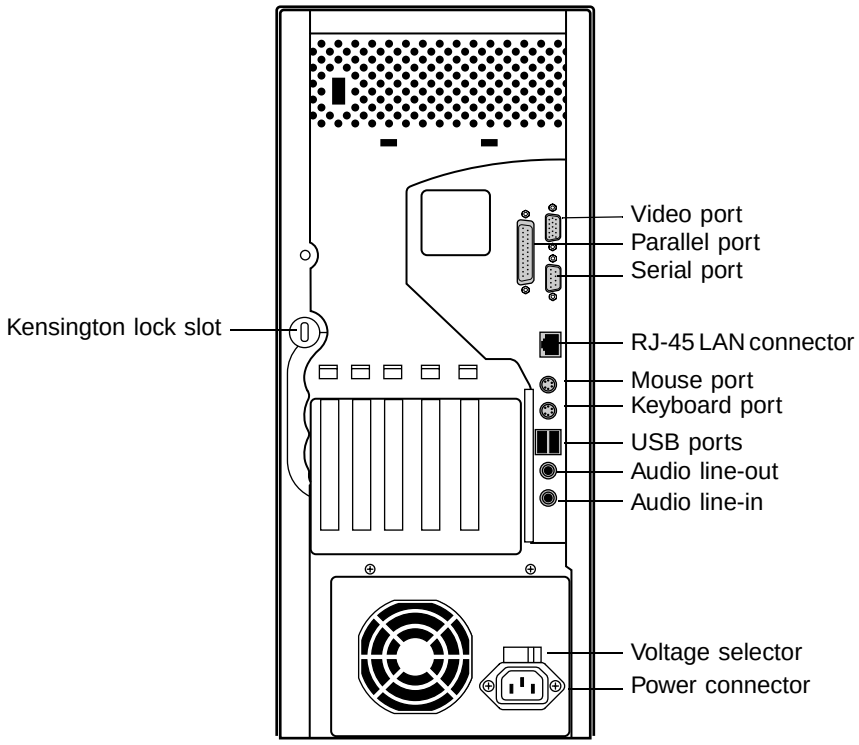
Power LED lights when the computer is turned on. The green light indicates your computer is using full power. The amber light indicates your computer is in power conservation mode.

Reset button restarts a system that becomes non-responsive.

Right panel release button lets you easily remove the right panel to access the internal components of your system.

Rear panel

The Mid Tower rear panel includes the following Input/Output (I/O) ports, connectors, and switches:



Audio Line-out, and Line-in jacks connect audio devices such as speakers, tape players, and microphones.

Kensington lock slot permits the use of a cable lock to secure the system.

Keyboard port connects a Personal System/2® (PS/2) compatible keyboard.

Mouse port connects a PS/2 compatible mouse.

Parallel port connects a printer or other parallel device.

Power Connector connects the computer power cord. The other end of the power cord plugs into an AC outlet or power strip.

RJ-45 LAN connector connects a network cable.

Serial port connects serial devices, such as a musical instrument digital interface (MIDI) device.

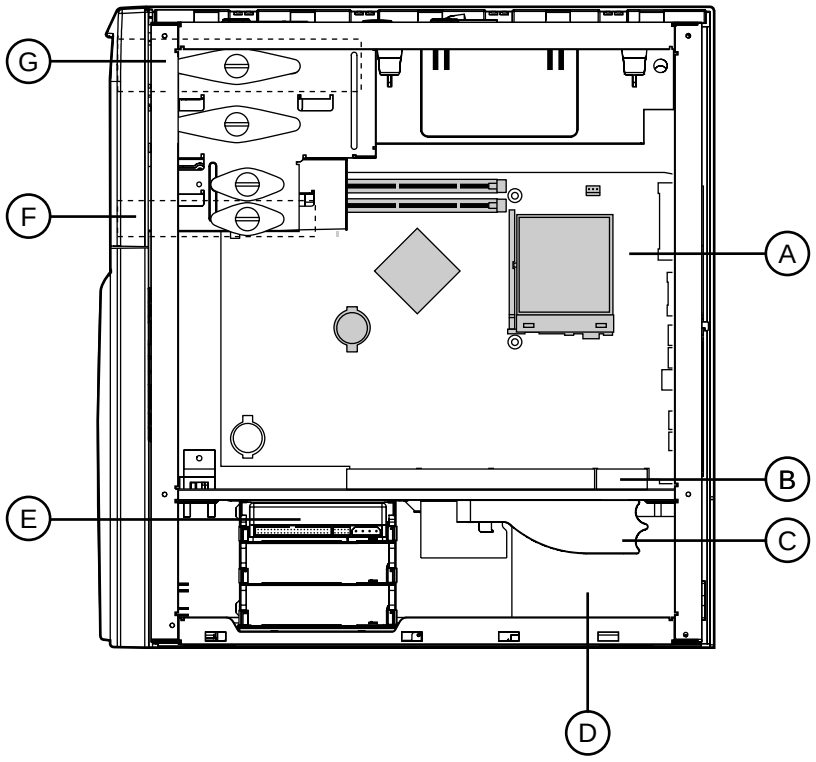
USB ports connect external Plug-and-Play devices, such as keyboards and pointing devices, that are automatically configured when they are plugged into the computer through one of these ports.

Video port connects the monitor interface cable.

Voltage selector sets the voltage for your area, either 115V (US standard) or 230V.

Inside the computer

The following illustration shows locations of various system components:



A System board

B Riser card

C Power supply release lever

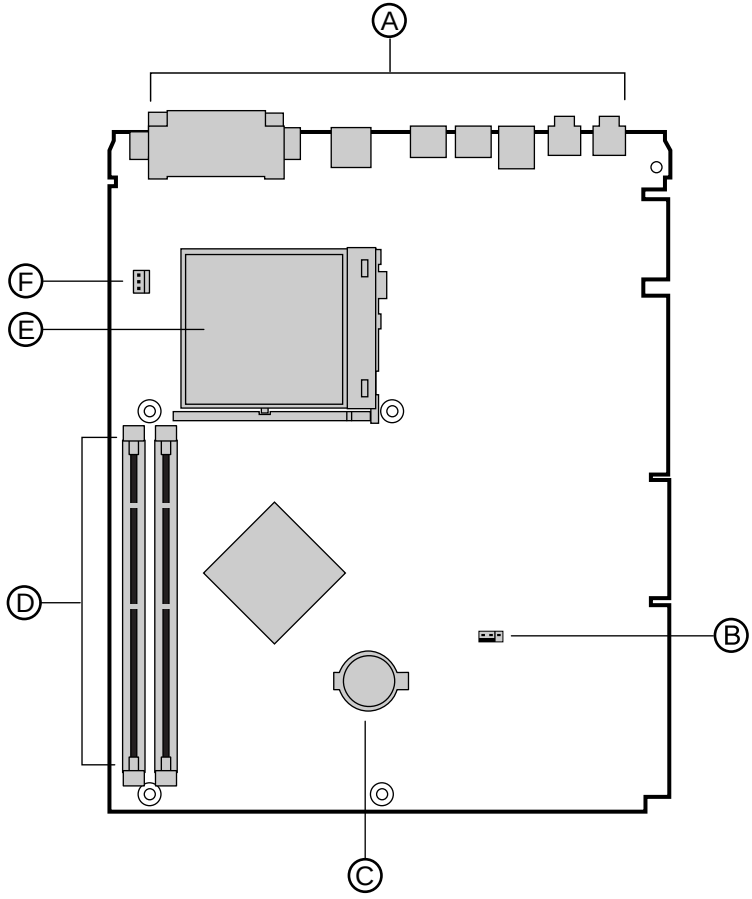
D Power supply

E Hard drive (hard drive shown here in top bay: bay location may vary)

F Diskette drive

G CD drive

System board



A I/O (input/output) connectors

B Configuration jumper (J6C1)

C Battery

D DIMM slots

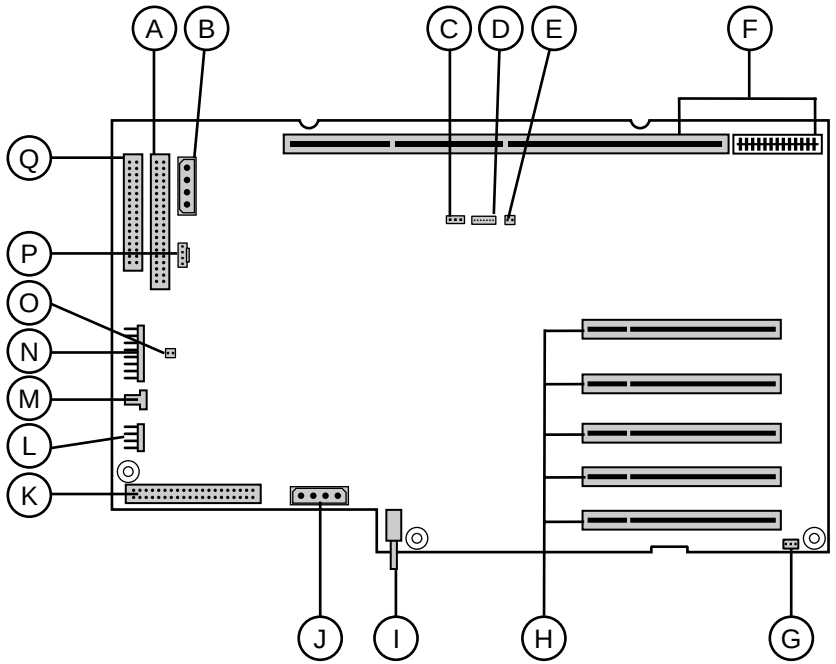
E Processor

F Processor fan connector

Riser card

The riser card is mounted to the chassis by three screws at the top. The riser card includes a chassis intrusion switch to alert you if the computer cover is removed. It also includes five PCI connectors for add-on cards.

Front



A Secondary IDE connector

B CD/diskette drive power connector

C Wake-on LAN connector (WOL)

D Net Alert connector (AOL)

E Ring-in connector

F System board connectors

G System chassis fan connector

H PCI slots (5)

I Chassis intrusion switch

J Hard drive power connector

K Primary IDE connector

L Remote lock/unlock

M Chassis fan connector

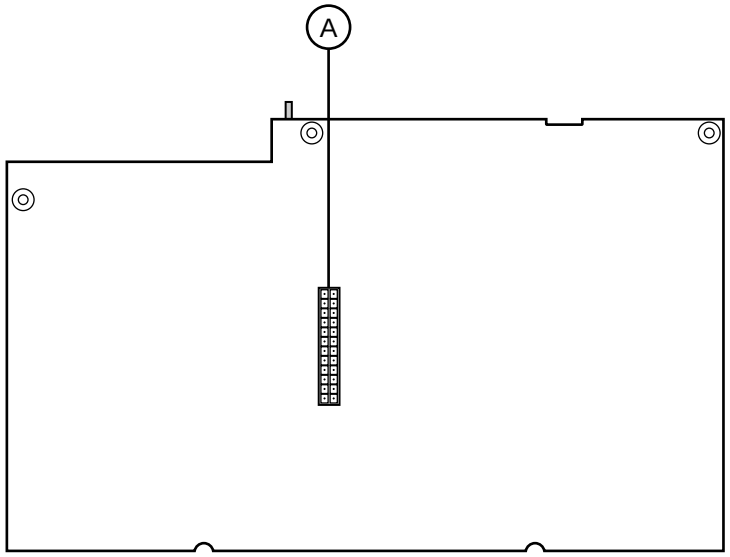
N Front panel connector

O SCSI LED connector

P CD/DVD audio connector

Q Diskette drive connector

Back



A Power supply connector

2

System Setup

Setting up your system

Follow the instructions on the poster that came with your system for assembly instructions. You can prepare a safer working environment before assembling your system by following the guidelines listed below.

- Provide a clean, flat, stable surface for your system. Allow at least 12 inches at the rear of the computer for cabling and air circulation.
- Obtain a grounded (three-prong) AC surge-protected power strip. A surge-protected power strip helps protect against AC line spikes.
- Protect your system from extreme temperature and humidity. Do not expose your system to direct sunlight, heater ducts, or other heat-generating objects.
- Keep your computer away from equipment that generates magnetic fields, such as unshielded stereo speakers. Even a telephone placed too close to the computer may cause interference.
- Plug the computer into a wall outlet or power strip that is easily accessible. When you turn off the computer with the power button, some electricity still flows through the computer. To remove all power from the computer, you need to unplug it.

Important

Keep the product carton and packing material, in case you need to send the system out for repair. If you return your system to the factory in different packaging, your warranty may be void.

Starting your system

Before you start your system for the first time:

- Refer to the safety information beginning on page 109.
- Make sure the voltage selector switch on the back of the computer is set to the correct voltage for your area. This switch is set at the factory to the correct voltage (see "Rear panel" on page 4 for voltage selector switch location).
- Make sure all cables are firmly connected to the proper ports on the rear panel of the computer.

Caution

Make sure your computer and peripherals are turned off and unplugged from the power outlet when you connect peripherals to the computer.

- Make sure the computer and monitor are plugged into an AC outlet or power strip.

To start the system:

1. If you have connected the system components to a power strip, make sure all the system components are turned off, then turn on the power strip.
2. Turn on the monitor by pressing the power button.
3. Turn on the computer by pressing the power button. The power light-emitting diode (LED) on the front panel is lit when the power is on.
4. Turn on any other components connected to the computer, such as speakers, a printer, or a scanner.

   If nothing happens when you turn on the system:

   - Recheck the power cables to see that they are securely plugged in and that your power strip (if you are using one) is plugged in and turned on.
   - Make sure the monitor is connected to the computer, plugged into the power strip or AC outlet, and turned on. You may also need to adjust the brightness and contrast controls on the monitor.

Wait until the startup procedure is finished before loading a diskette in the diskette drive, or the computer may search the diskette for startup information.

Understanding the Power-On Self-Test

When you turn on your computer, the Power-On Self-Test (POST) routine checks the system memory and components. To see this information on the screen, press TAB during POST. Press ESC to bypass the remaining memory count.

The system displays an error message if POST finds any problems. Write down the error message that appears.

Setting up the operating system

The first time you start your computer, the operating system takes a few minutes to set up.

Refer to your software documentation for specific questions.

To complete the operating system setup:

1. After the computer starts, the start-up wizard opens. Continue by clicking **Next**.
2. Type the requested information in the appropriate text boxes. When you have finished entering the information, continue by clicking **Next**.
3. Continue following the instructions and selecting options in the start-up wizard dialog boxes, clicking **Next** to move through the dialog boxes until the wizard tells you to restart your computer.

   If you need to return to the previous dialog box to change any of your entries, click **Back**.
4. Restart your system. The setup is complete.

Turning off your system

Every time you turn off your system, shut down the operating system first. You may lose data if you do not follow the proper procedure.

To turn off your system in Windows 95:

1. On the taskbar, click **Start**.
2. Click **Shut Down**.
3. Select **Shut down the computer?**
4. Click **Yes**. The computer turns off.
5. Turn off the monitor and peripherals.

To turn off your system in Windows NT or Windows 98:

1. Click **Start**, then select **Shut Down** (Windows 98) or **Shut down the computer?** (Windows NT).
2. Select **Shut Down**.
3. Click **OK**. The computer turns off. If you see a message saying **It is now safe to turn off your computer** (Windows NT only), turn off the computer by pressing the power button.
4. Turn off the monitor and peripherals.

Warning

When you turn the computer off by pressing the power button, some electric current still flows through the computer. Before opening the computer case or connecting or removing any peripherals, turn off the computer and then unplug the power cord and modem cord (if installed).

Important

You can use the power button to turn off your system if the system does not respond to commands. However, you must hold the power button in for 4 seconds to turn it off (Windows 95 and Windows 98 only).

Resetting your system

If your computer does not respond to keyboard or mouse input, you may have to close any programs that are not responding. If closing unresponsive programs does not restore your computer to normal operation, you may have to reset the system.

To reset your system in Windows 95 or Windows 98:

1. Press CTRL+ALT+DEL. A window opens that lets you close a program that is not responding.
2. Highlight a program that displays a "not responding" message and click **End Task**. Close the program by following any additional screen prompts.
3. If the computer does not respond, restart the computer by pressing the reset button.
4. After displaying some of the startup screens, a message appears asking if you would like to run ScanDisk.
5. Run ScanDisk by pressing any key. Follow the on-screen instructions. When the checks are finished, Windows starts.

To reset your system in Windows NT:

1. Press CTRL+ALT+DEL. A window opens that lets you to close a program that is not responding.
2. Click **Task Manager**, then select the program that is not responding.
3. Close the program by clicking **End Task**.
4. If the computer does not respond, press the reset button to restart the computer.

As a part of the regular startup process, a program to check the disk status automatically runs. When the checks are finished, Windows starts.

3

Case Access

Static electricity precautions

Static electricity can permanently damage electronic components in your computer. When opening your computer case, always perform the following procedure.

Caution

Prevent electrostatic damage to your computer by following static electricity precautions every time you open your computer case.

To avoid static electricity discharge:

1. Wear a grounding wrist strap (available at most electronics stores).
2. Turn off the computer power.
3. Discharge any static electricity by touching a bare metal surface on the back of the case.
4. Unplug all power cords from AC outlets and disconnect the modem cable (if installed).

Follow these precautions to avoid electrostatic damage to your system components:

- Avoid static-causing surfaces such as plastic and packing foam in your work area.
- Remove the parts from their antistatic bags only when you are ready to use them. Do not lay parts on the outside of antistatic bags since only the inside of the bags provides antistatic protection.
- Always hold cards by their edges and their metal mounting brackets. Avoid touching components on the cards and the edge connectors that connect to expansion slots.
- Never slide cards or other parts over any surface.

Warning

Avoid exposure to dangerous electrical voltages and moving parts by turning off your computer. Unplug the power cord and modem cord before removing the computer cover.

Opening the case

The case has two removable side panels. Both panels are screwless, meaning you do not have to remove any screws to take off the panels.

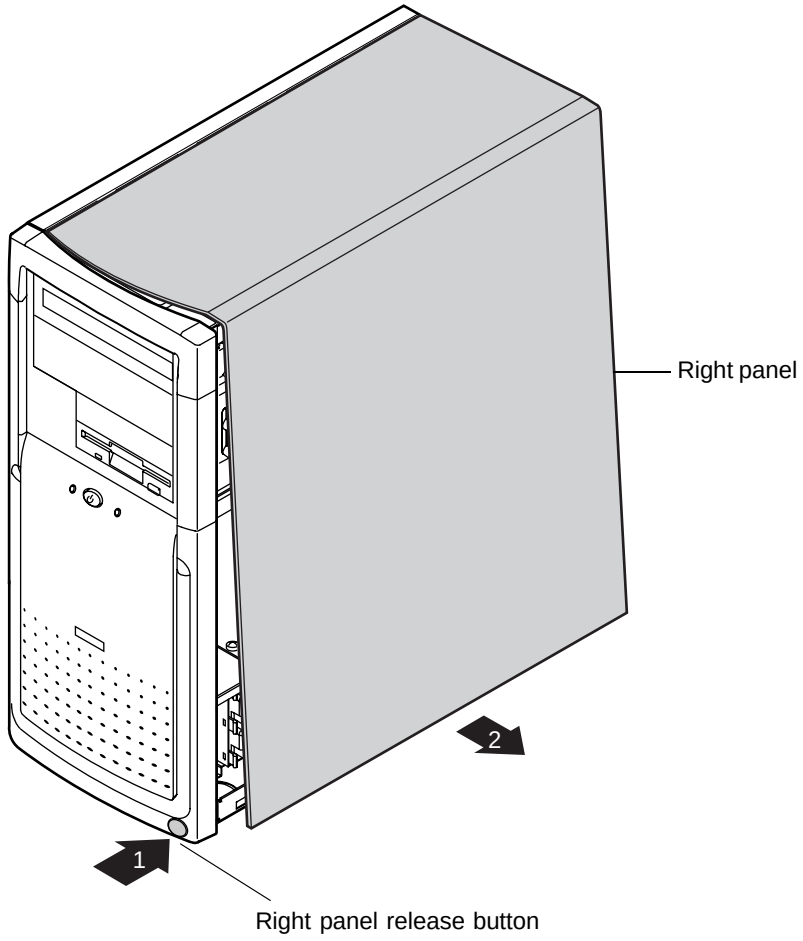
The right panel is removed by pressing a button located on the front panel. The L-shaped panel covers both the right side and top of the chassis. The left panel is removed by sliding a tab located on the top of the chassis.

Removing the side panels

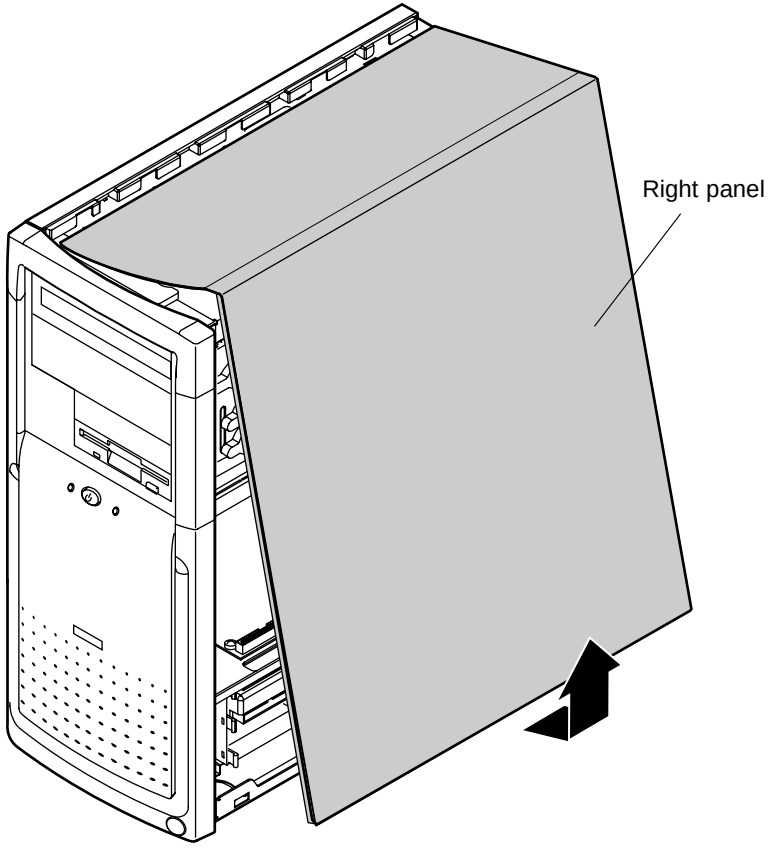
To remove the right panel:

1. Because the components inside your computer are extremely sensitive to static electricity, make sure to observe the "Static electricity precautions" on page 17.
2. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.

3 Push the release button located in the lower right-hand corner of the front bezel. The bottom portion of the right panel unlatches from the chassis.

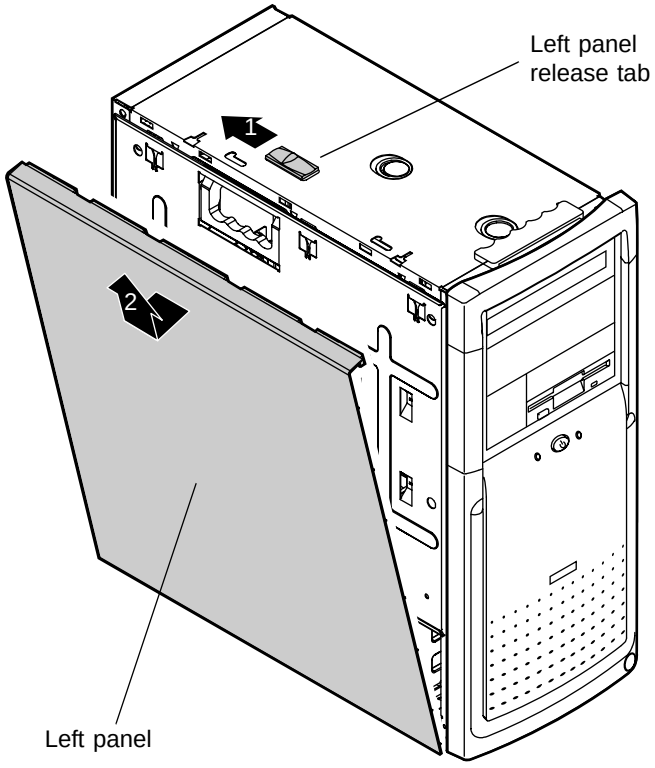


4 Lift up on the right panel, then lift the panel up and away from the chassis.



To remove the left panel:

1. Remove the right panel. (See "Removing the side panels" on page 19 for instructions.)
2. Slide the left panel release tab toward the rear of the chassis. This unlatches the left panel from the chassis.



3. Grasp the left panel, then lift the panel up away from the chassis.

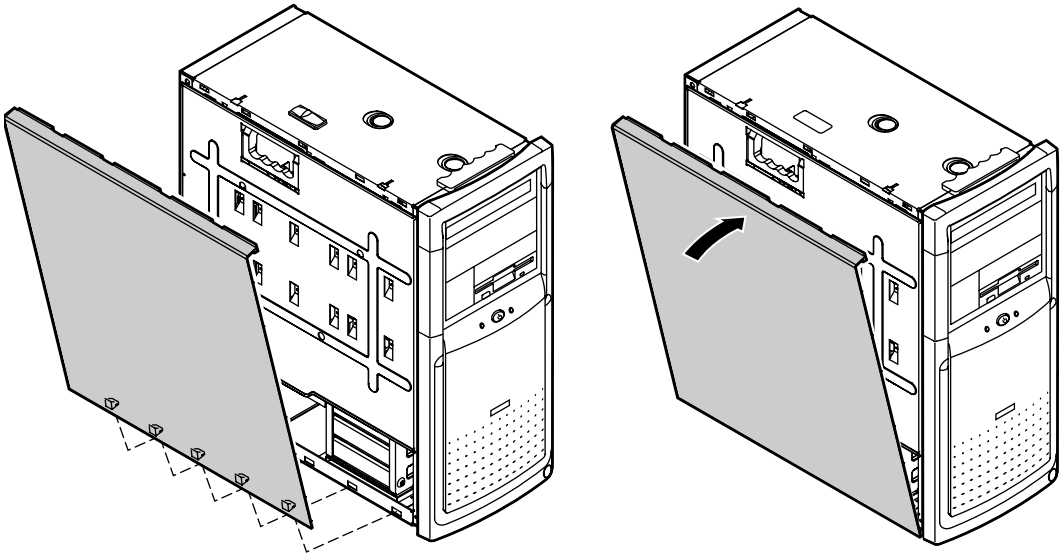
Closing the case

Replace the cover as soon as you finish installing or removing components so that dust and dirt (which could damage the computer) do not collect inside the computer.

Replacing the side panels

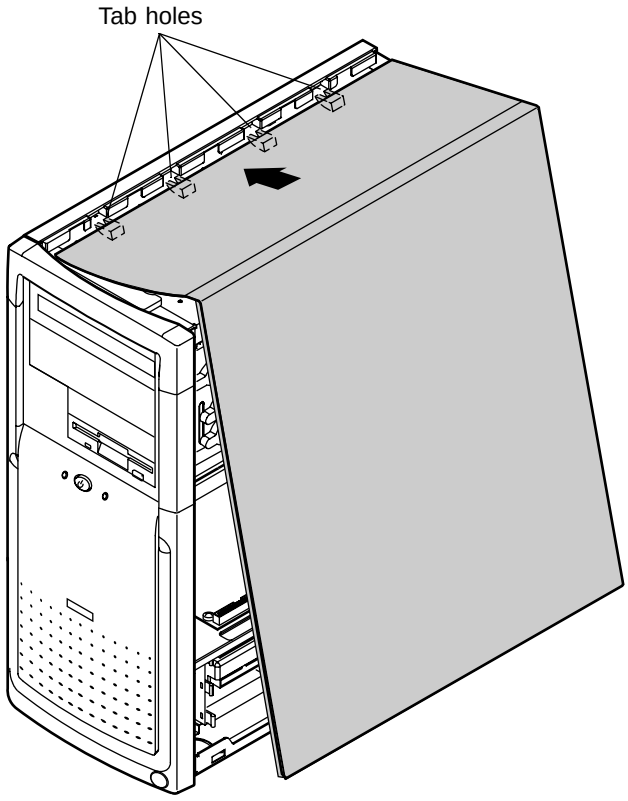
To replace the left panel:

1. Align the tabs at the bottom of the panel with the tab holes at the base of the chassis.
2. Insert the tabs into the tab holes.
3. Push the panel towards the chassis until it locks into place.



To replace the right panel:

1 Align the tabs at the top of the panel with the tab holes at the top of the chassis.



2 Insert the tabs into the tab holes.

3 Push the bottom of the right panel towards the chassis until the tabs engage the tab holes at the bottom of the chassis. The chassis automatically locks into place.

4 Reconnect the power cord and all other cords you removed.

Replacing and Adding Drives

4

About replacing drives

The standard configuration for your computer includes a 5.25-inch IDE CD drive, a 3.5-inch IDE hard drive, and a 3.5-inch diskette drive.

Your computer contains the following drive bays:

- Two 3.5-inch drive bays that can be accessed from outside the computer.
- Two 5.25-inch drive bays that can be accessed from outside the computer.
- Three 3.5-inch drive bays that can only be accessed from inside the computer.

As you prepare to install drives, keep the following in mind:

- If you remove a drive, place it in an antistatic bag.
- Before you install a drive, see the drive's documentation for information on configuring the drive, setting any jumpers on the drive, and attaching cables to the drive.
- If you are installing a drive that uses an add-in controller, install the add-in card before you install the drive.
- IDE hard drives can be configured as single, master, or slave. IDE CD drives can be configured as master or slave. Configure the drives by using the drive-select jumpers located on the drives.

- If only one drive is attached to a controller cable, configure the drive as single if it is a hard drive or master if it is a CD drive. If two drives of any type are attached to the cable, configure one as master and one as slave.
- You may need to configure the drives you install using the BIOS Setup utility program. Press F1 at start up to access the BIOS Setup utility program.

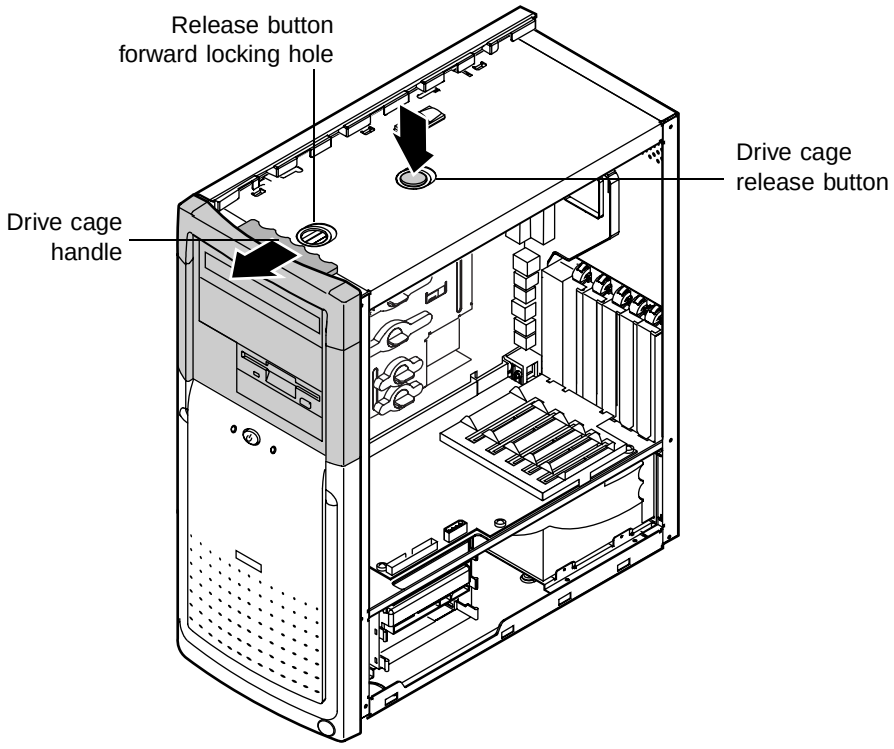
Releasing the drive cage

You do not have to remove any screws to release the drive cage. The drive cage is secured in the chassis by a drive cage release button. Once the release button is pressed, you use the handle at the top of the cage to slide the cage forward from the chassis. Slide the drive cage forward to add or replace memory or to remove the cover filler to add an additional CD or diskette drive.

To release the drive cage:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)

3 Using one hand, grasp the drive cage handle located above the drive cage. Using your other hand, press the drive cage release button while pulling the drive cage toward the front of the chassis.



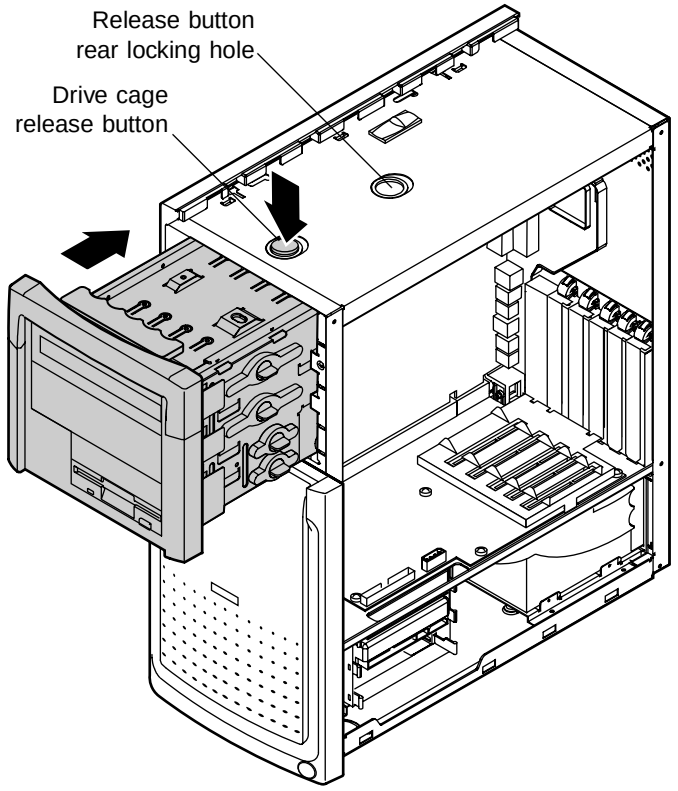
4 Slide the drive cage forward until the drive cage release button snaps into the forward locking hole.

Reinserting the drive cage

You can easily slide the drive cage back into the chassis.

To reinsert the drive cage:

1. With one hand, press the drive cage release button, then push the drive cage back into the chassis with the other hand until the release button snaps into the rear locking hole.



2. Replace the right panel. (See “Replacing the side panels” on page 23 for instructions.)

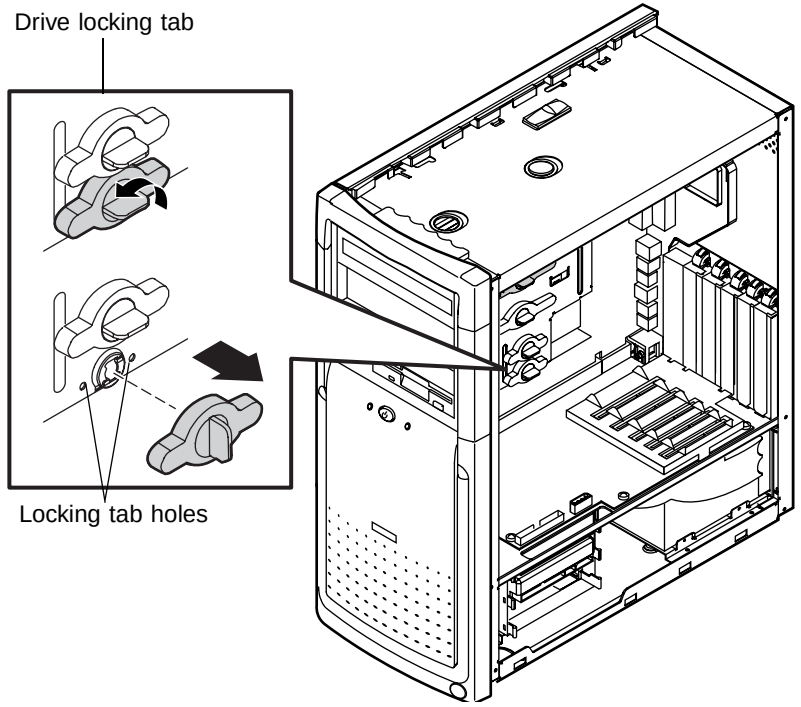
3. Reconnect the power cord and all other cords you removed, then turn on the system.

Replacing the diskette drive

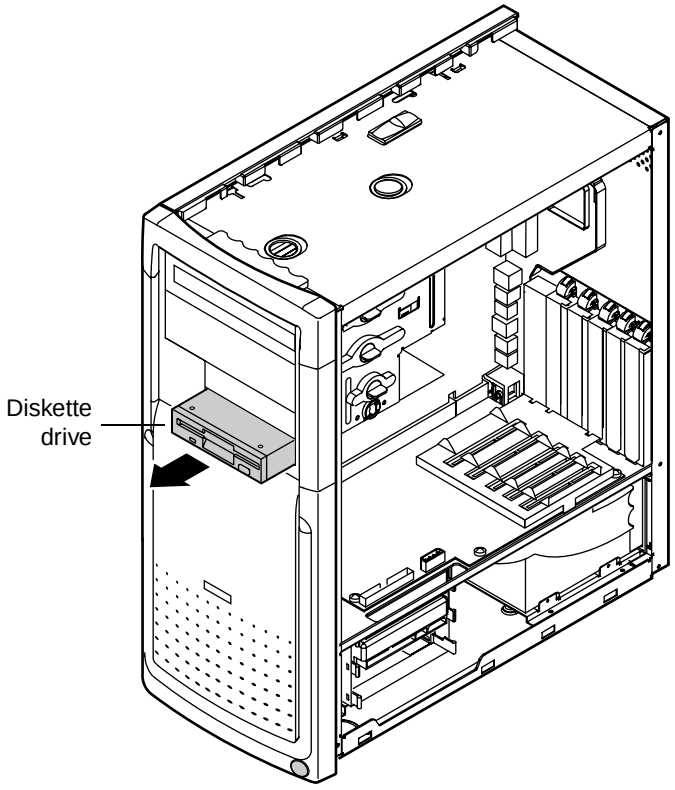
The 3.5-inch diskette drive is attached to the drive cage with a drive locking tab. The drive cage is secured in the chassis with a drive cage release button. You do not have to remove any screws to release the drive cage or remove the diskette drive.

To replace a 3.5-inch diskette drive:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Disconnect the power and data cables from the back of the diskette drive.
4. Release the drive locking tab from the diskette drive bay by turning the knob on the tab counter-clockwise to the unlock position, then remove the tab from the drive cage.



5 From the rear of the drive cage, push the diskette drive toward the front of the chassis and through the front bezel.



6 Place the new drive into the drive cage. Make sure the threaded holes on the diskette drive align with the locking tab holes on the drive cage.

7 Replace the drive locking tab.

8 Connect the power and data cables to the drive.

9 Replace the right panel. (See “Replacing the side panels” on page 23 for instructions.)

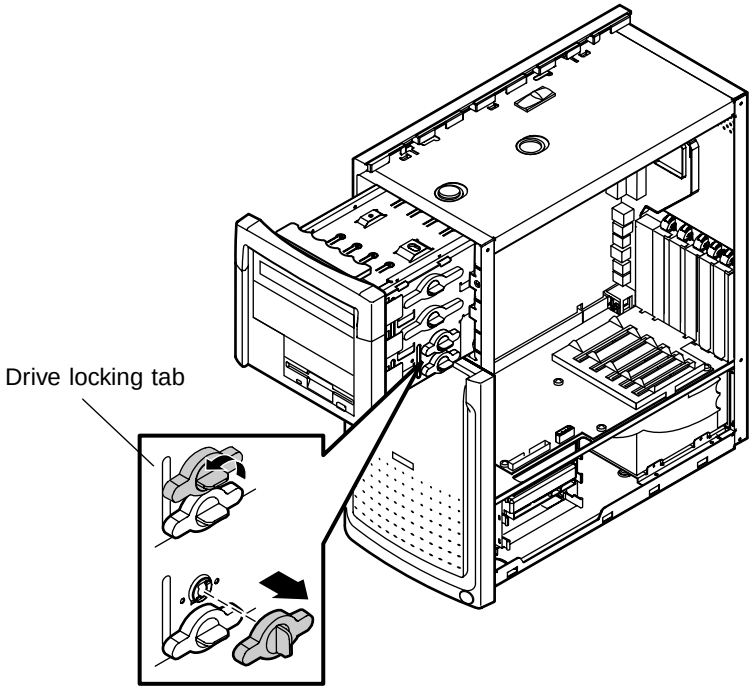
10 Reconnect the power cord and all other cords you removed, then turn on the system.

Adding a second diskette drive

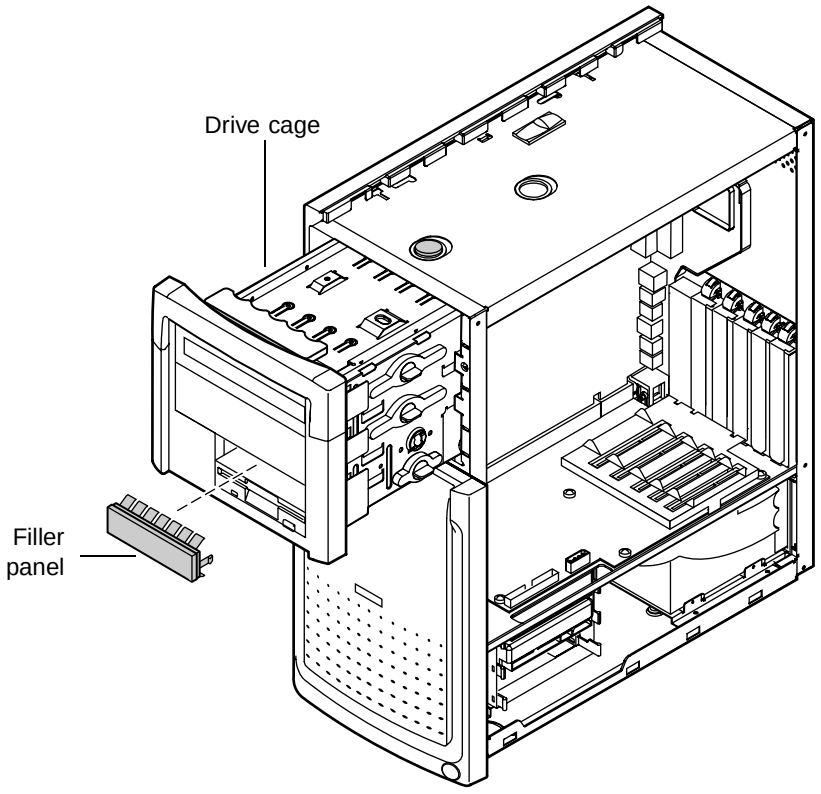
You can add a second 3.5-inch diskette drive. You do not have to use any screws to add the diskette drive, but you need to purchase a diskette drive connector cable that supports two devices.

To add a second diskette drive:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Release the drive cage and slide it forward in the chassis until the release button snaps into the forward locking hole.
4. Release the drive locking tab from the empty diskette drive bay by turning the knob on the tab counter-clockwise to the unlock position, then remove the tab from the drive cage.



5 Remove the filler panel on the front bezel by squeezing the two tabs on the left side of the filler panel. The filler panel then ejects.



6 Place the new diskette drive into the drive cage. Make sure the threaded holes on the diskette drive align with the locking tab holes on the drive cage.

7 Replace the drive locking tab.

8 Connect the power and data cables to the drive.

9 Push the release button in and slide the drive cage back into the chassis until the button snaps into the rear locking hole.

10 Replace the right panel.

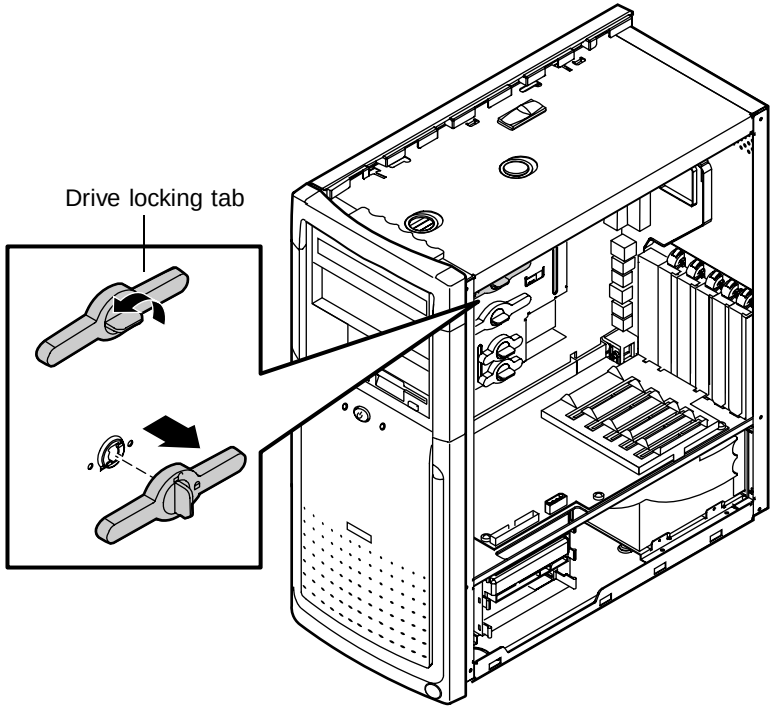
11 Reconnect the power cord and all other cords you removed, then turn on the system.

Replacing the CD drive

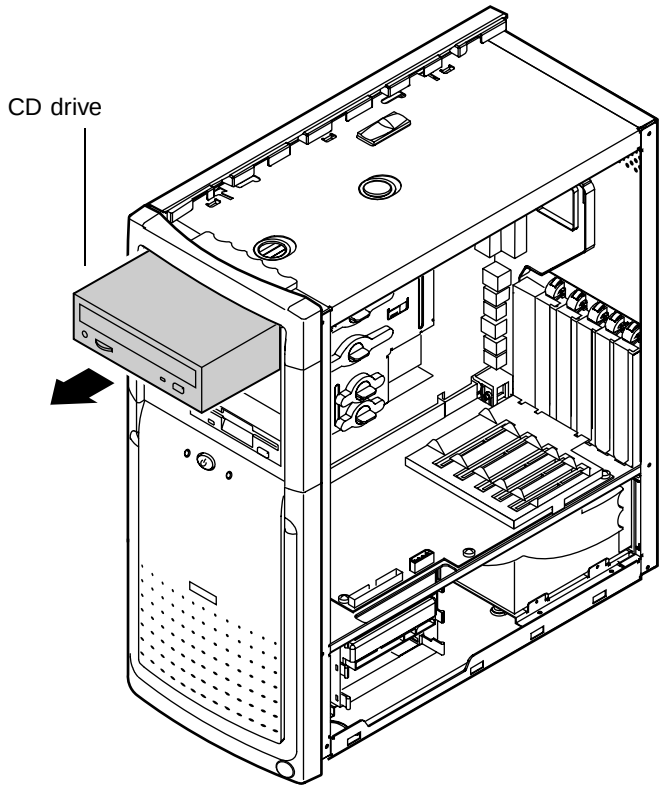
The CD drive is attached to the drive cage by a drive locking tab. You do not have to remove any screws to remove or install a CD drive.

To replace the CD drive:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Disconnect the power, data, and audio cables from the back of the drive.
4. Release the drive locking tab from the drive bay by turning the knob on the tab counter-clockwise to the unlock position, then remove the tab from the drive cage.



5 From the rear of the drive cage, push the drive toward the front of the chassis and through the front bezel.



6 Set any jumpers on the new drive. (See the drive documentation for more information.)

7 Place the new CD drive into the drive cage. Make sure the threaded holes on the drive align with the locking tab holes on the drive cage.

8 Replace the drive locking tab.

9 Connect the power, data, and audio cables to the drive.

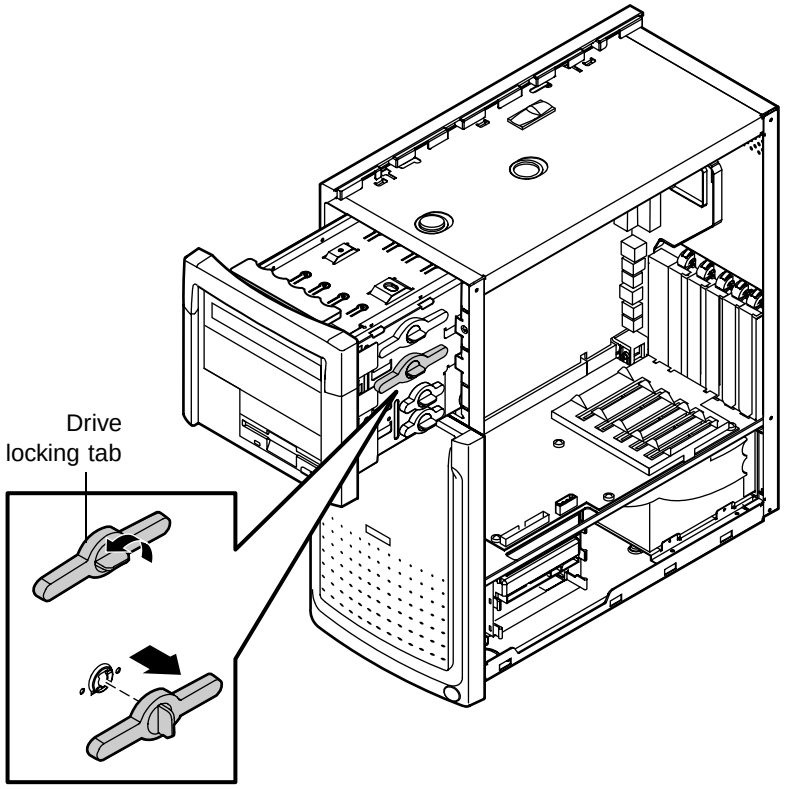
10 Replace the right panel (see “Replacing the side panels” on page 23).

11 Reconnect the power cord and all other cords you removed, then turn on the system.

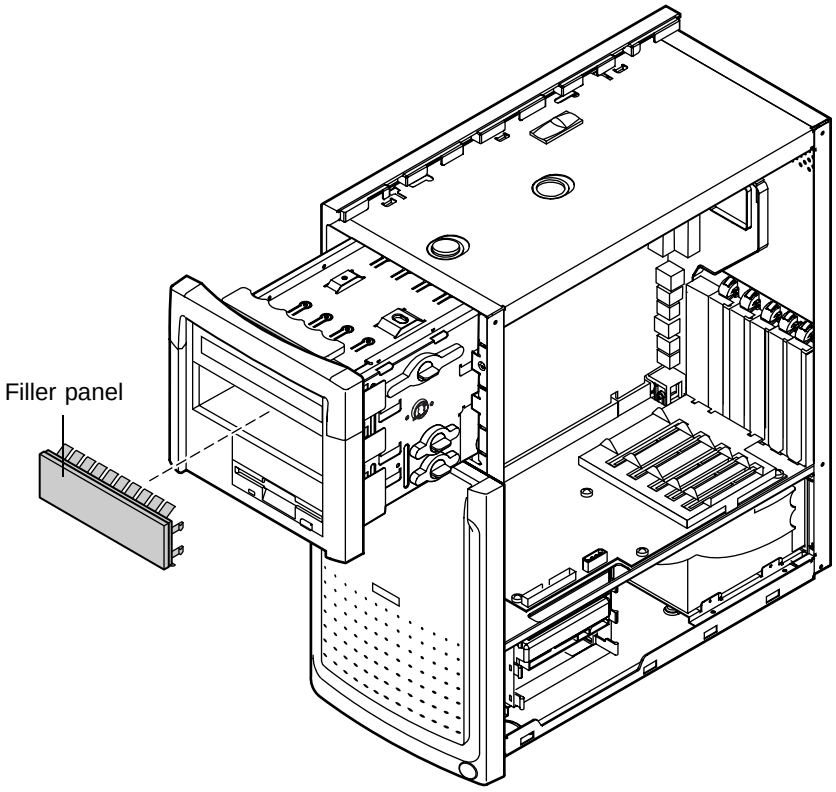
Adding a second 5.25-inch device

You can add a second 5.25-inch device, such as a CD-RW or CD/DVD drive. You do not have to use any screws to add the device.

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Release the drive cage and slide it forward in the chassis until the release button snaps into the forward locking hole.
4. Release the drive locking tab from the empty drive bay by turning the knob on the tab counter-clockwise to the unlock position, then remove the tab from the drive cage.

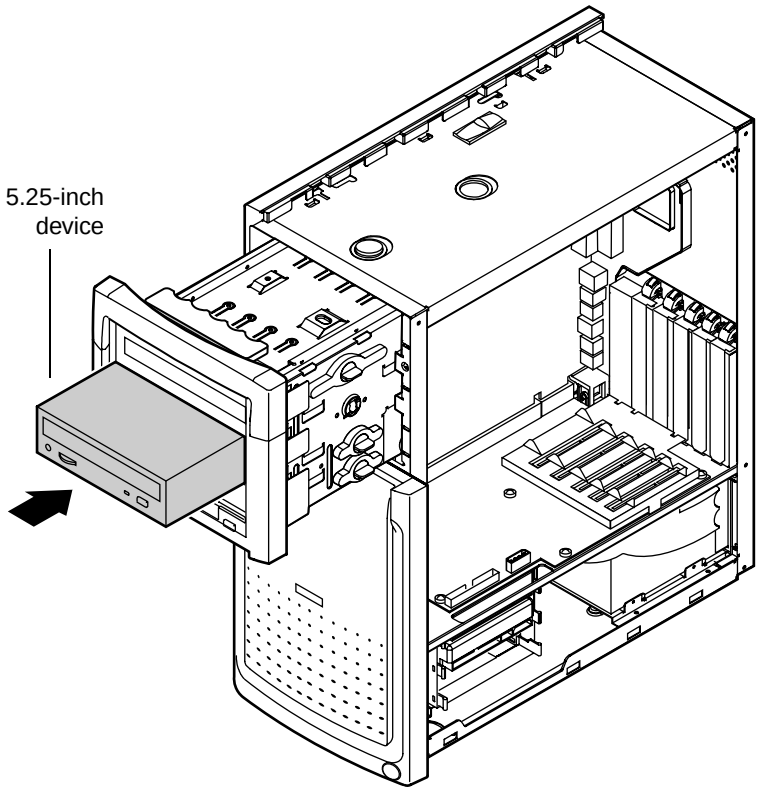


5 Remove the filler panel on the front bezel by squeezing the two tabs on the left side of the filler panel. The filler panel then ejects.



6 Set any jumpers on the new drive. (See the drive documentation for more information.)

7 Place the new drive into the drive cage. Make sure the threaded holes on the drive align with the locking tab holes on the drive cage.



8 Replace the drive locking tab.

9 Connect the power and data cables to the drive.

10 Push the release button in and slide the drive cage back into the chassis until the button snaps into the rear locking hole.

11 Replace the right panel.

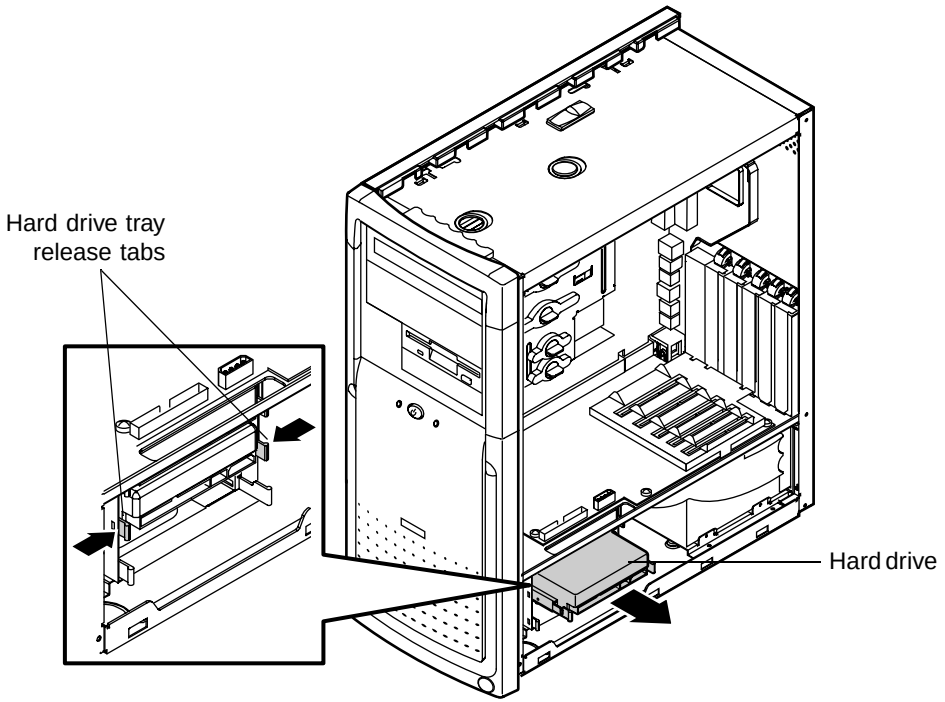
12 Reconnect the power cord and all other cords you removed, then turn on the system.

Replacing the hard drive

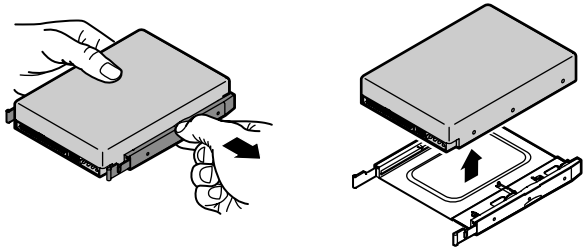
The 3.5-inch hard drive is located in a metal tray that slides in and out of the hard drive cage. The tray has a spring so you can expand the tray to insert a drive. When you release the sides of the tray it will contract back together and secure the drive.

To replace the 3.5-inch hard drive:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Disconnect the power and data cables from the hard drive.
4. The metal tray that holds the hard drive is secured by a set of hard drive tray release tabs. Remove the tray by squeezing both release tabs inward, then slide the hard drive tray out of the drive cage.

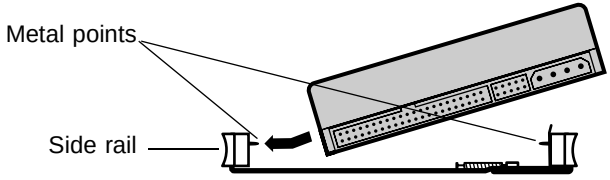


5 Pull on the rail to expand the tray, then remove the drive from the tray.

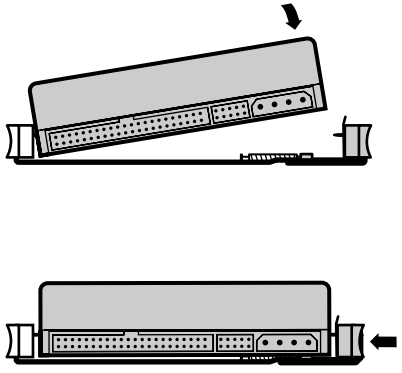


6 Set any jumpers on the new drive. (See the drive documentation for more information.)

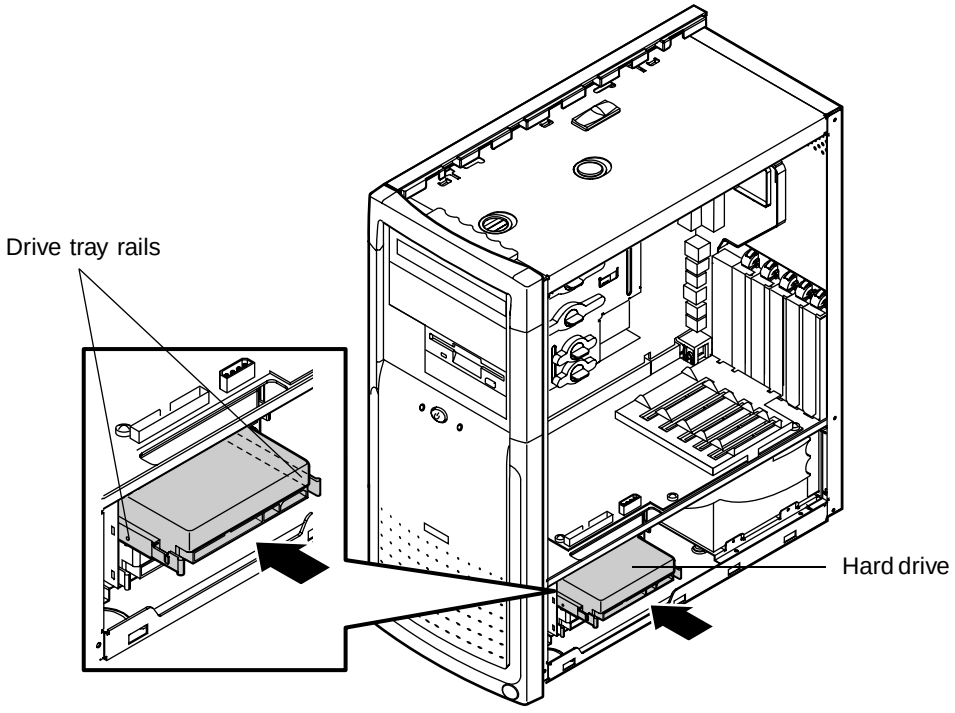
7 Align the threaded holes on the side of the hard drive with the metal points on the tray, then press the drive against the side rail.



8 Expand the tray until it fits the size of your drive, then lower the drive into the tray. Release the tray so it can contract to secure the drive.



9 Align the drive tray rails with the side channels in the hard drive cage, then slide the drive tray into the hard drive cage.



10 Push the drive tray into the drive cage until the release tabs snap into place.

11 Connect the power and data cables to the drive.

12 Replace the right panel. (See “Replacing the side panels” on page 23 for instructions.)

13 Reconnect the power cord and all other cords you removed, then turn on the system.

Adding an additional hard drive

The E1400 Mid Tower hard drive cage can hold up to three 3.5-inch hard drives.

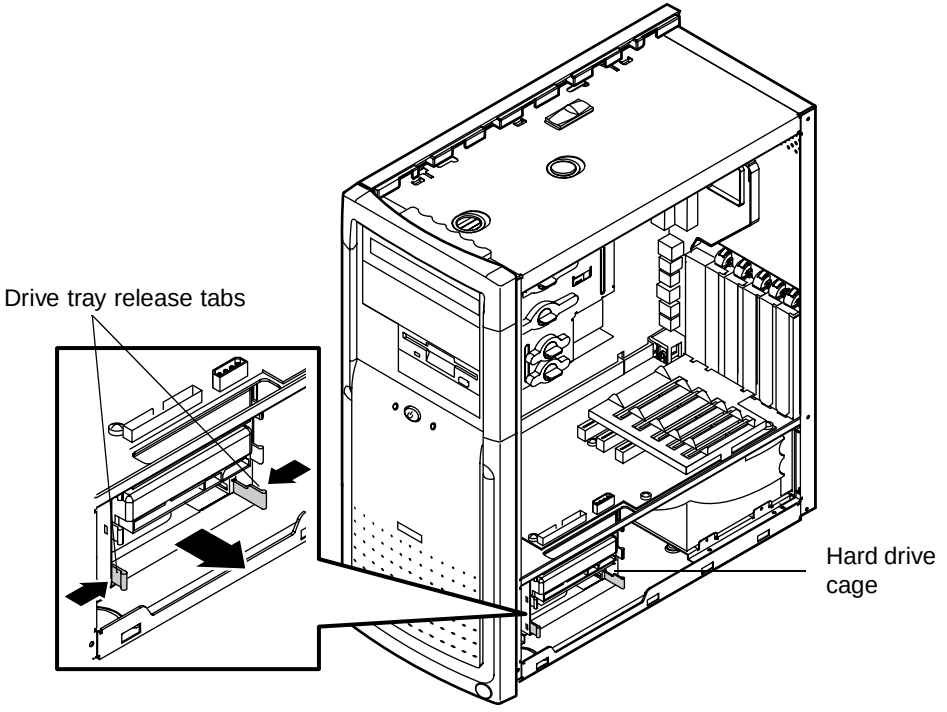
Important

The IDE controller supports two IDE devices. If you want to install a third hard drive you need to install an add-in controller card.

To add an additional hard drive:

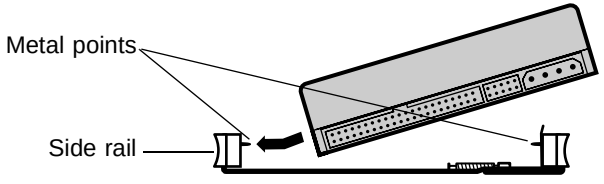
1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Choose the bay in the drive cage where you want to install the additional hard drive. The metal tray that will the hold the hard drive is secured by a set of hard drive tray release tabs.

4 Remove the tray by squeezing both release tabs inward, then slide the hard drive tray out of the drive cage.

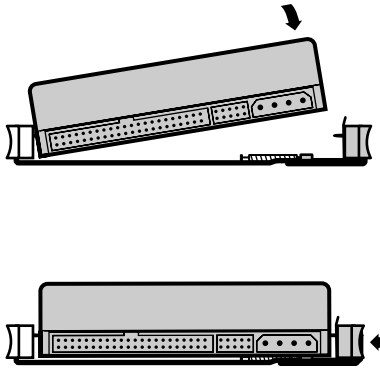


5 Set any jumpers on the new drive. (See the drive documentation for more information.)

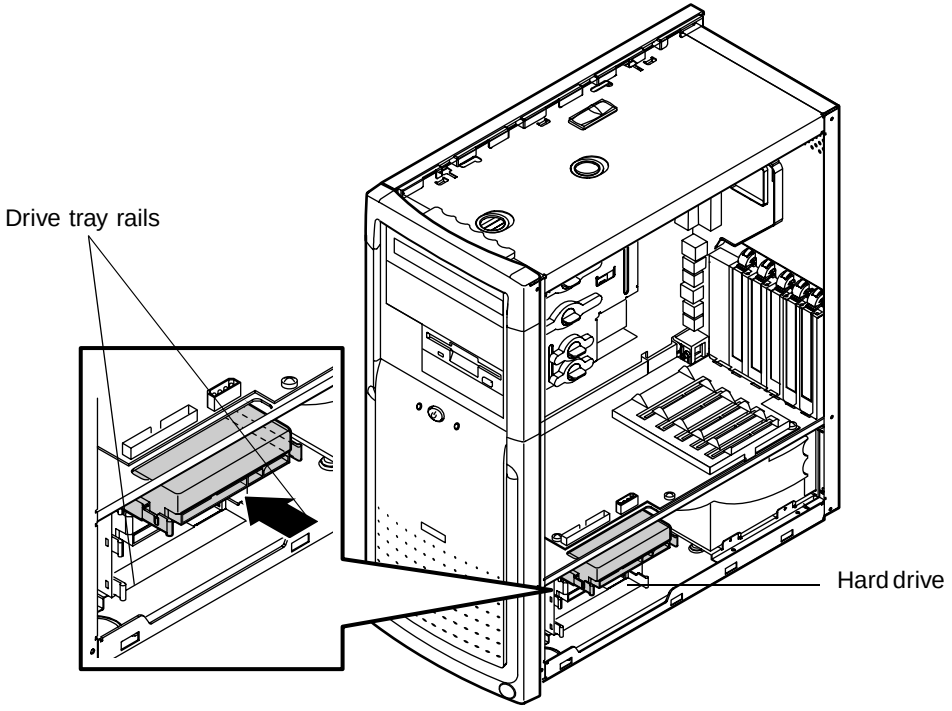
6 Align the threaded holes on the side of the hard drive with the metal points on the tray.



7 Expand the tray until it fits the size of your drive, then lower the drive into the tray. Release the tray so it can contract to secure the drive.



8 Align the drive tray rails with the side channels in the hard drive cage, then slide the drive tray into the hard drive cage.



9 Push the drive tray into the drive cage until the release tabs snap into place.

10 Connect the power and data cables to the drive.

11 Replace the right panel. (See “Replacing the side panels” on page 23 for instructions.)

12 Reconnect the power cord and all other cords you removed, then turn on the system.

System Components

5

Adding or replacing memory

The Synchronous Dynamic Random Access Memory (SDRAM) Dual Inline Memory Modules (DIMMs) supported by your system board conform to the following standards:

- 16 MB, 32 MB, 64 MB, 128 MB, and 256 MB
- Non-ECC (64-bit) memory
- Single- or double-sided configurations
- 512 MB maximum system memory

The system board contains two DIMM sockets. You can fill the sockets with 16-MB, 32-MB, 64-MB, 128-MB, or 256-MB DIMMs in any combination to expand the SDRAM up to 512 MB.

If your processor has a 66-MHz front side bus (FSB), you can use 66-MHz or 100-MHz SDRAM. If your processor has a 100-MHz FSB, you should use only 100-MHz SDRAM.

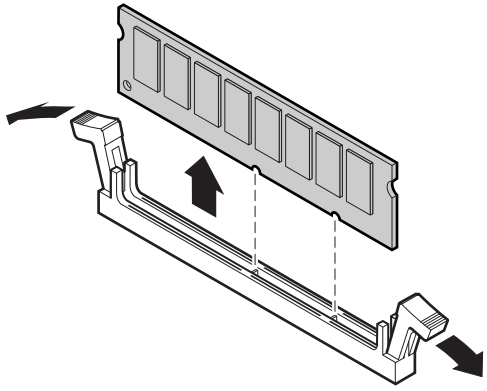
No jumper settings are required for the memory size or type because the BIOS automatically detects this information.

To install DIMMs:

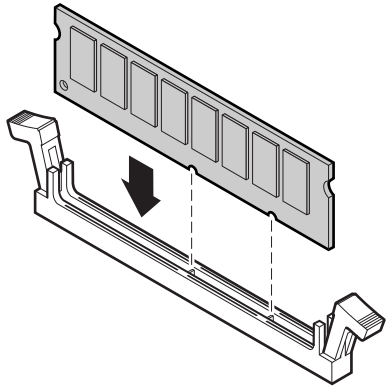
1. Turn off the computer, disconnect the power cord, and disconnect the modem cord, if your computer has a modem.
2. Open the case by following the instructions on page 19, observing the static electricity precautions on page 17.
3. Remove the drive cage so that you can access the DIMM sockets. (See page 26 for instructions on removing the drive cage.)
4. Pull open the socket clamps on each side of the DIMM socket and lift the DIMM out of the socket.

Caution

Never try to remove a DIMM without releasing the clamps. You may break the socket, causing serious damage.



5 Insert the DIMM into the socket and align the two bottom notches in the DIMM with the two notches in the DIMM socket.



6 Gently press the DIMM into the socket until the plastic socket clamps on each side of the socket snap into the notches on the side of the DIMM.

7 Replace the drive tray. (See “Reinserting the drive cage” on page 28 for instructions.)

8 Close the case. (See “Closing the case” on page 23 for instructions.)

9 Reconnect the cords you removed, then turn on the computer.

Adding an expansion card

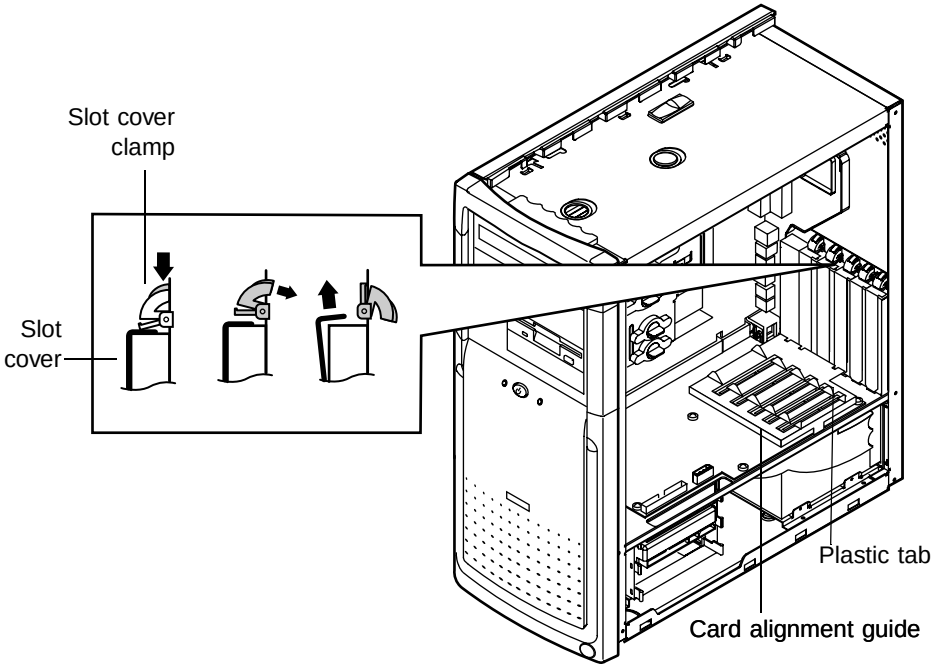
The E1400 Mid Tower chassis has five expansion slots for PCI cards. The riser card has five PCI connectors.

A card alignment guide attached to the riser card helps you align PCI cards in the slots.

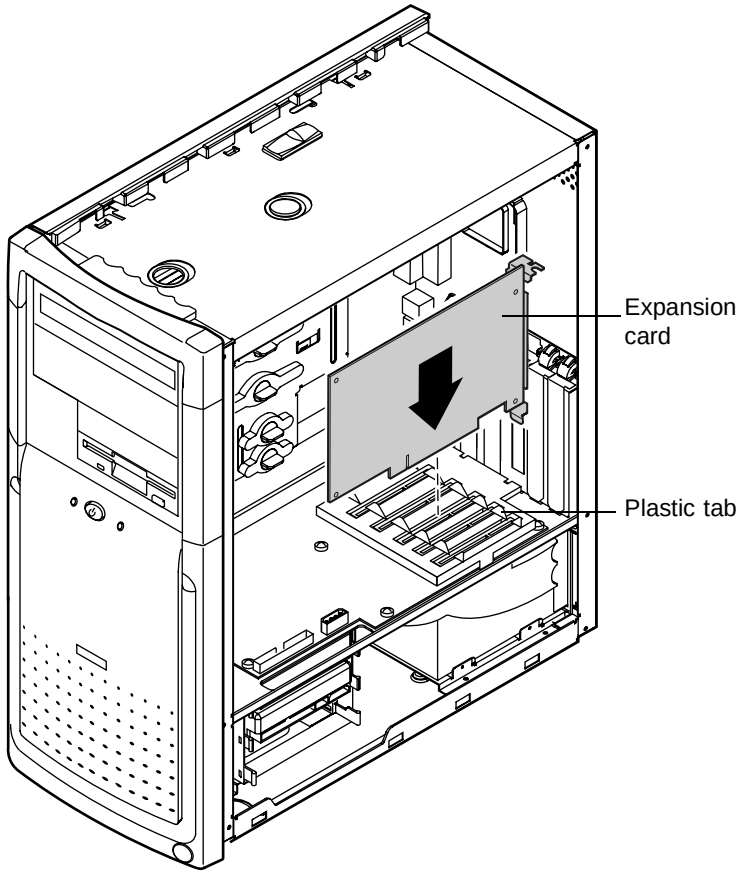
To add a PCI expansion card:

1. Set any jumpers and switches on the card (see the card documentation for instructions).
2. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
3. Open the right panel (see “Removing the side panels” on page 19 for more information, and observe the “Static electricity precautions” on page 17.)
4. Locate an available slot.

5 From inside the computer, press the slot cover clamp down and toward the back of the chassis, then lift the slot cover up and out of the chassis.



6 Insert the edge of the expansion card into the slot on the riser card and press firmly to seat the card. If the plastic tabs on the card alignment guide interfere with the proper seating of the card, the tabs may be snapped off to accommodate the installation the card.



7 Close the slot cover clamp to secure the card.

8 Connect any cables to the card (see the card documentation for proper jumper settings and cable orientation).

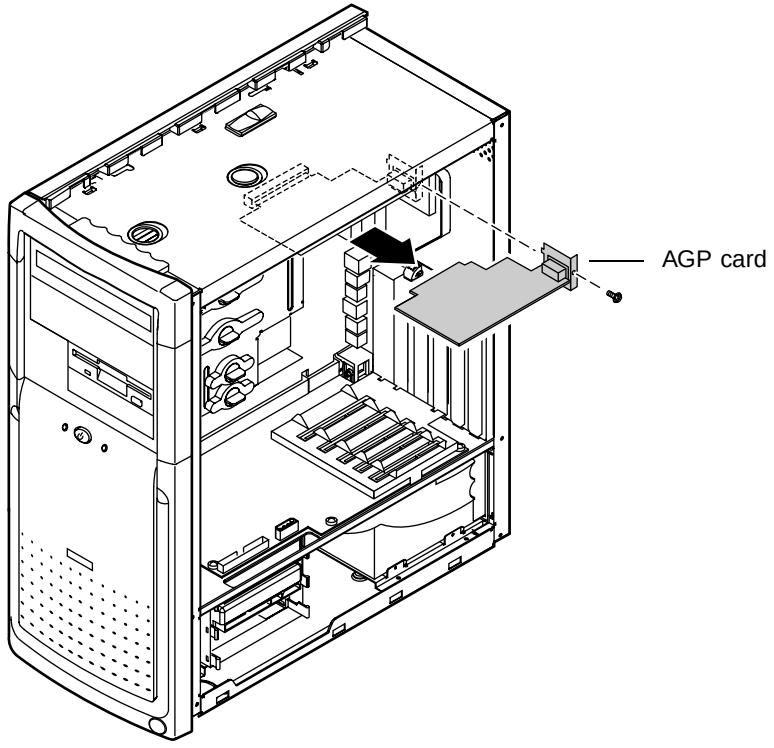
9 Replace the right panel. (See "Replacing the side panels" on page 23 for more information.)

Replacing the AGP card

Observe the following instructions for replacing the Accelerated Graphics Port (AGP) card.

To replace the AGP card:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Using a Phillips screwdriver, remove the screw that secures the AGP card to the rear panel, then pull out the card.



4. Install the new AGP card, making sure the card is firmly seated on the system board, then secure the AGP card to the rear panel with the screw.
5. Reconnect the monitor cable, then turn on the system and all peripheral devices.

Replacing the battery

The battery (3.3V) provides power for the system real-time clock and CMOS RAM, which holds the system configuration information.

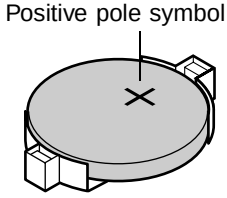
If your battery is failing you may notice your system clock slowing down and giving you the incorrect time. If so, open the BIOS Setup utility and write down all the values in the BIOS Setup utility screens before replacing the battery. Replacing the battery resets the BIOS Setup utility to its default values.

Caution

There is a danger of explosion if the battery is incorrectly replaced. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

To replace the battery:

1. Restart the computer and start the BIOS Setup utility by pressing F1 when you are prompted to do so.
2. Write down the CMOS values from the Main Setup utility screens so you can reenter them after you replace the battery. (For more information, see "About the BIOS Setup utility" on page 65.)
3. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
4. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
5. Locate the battery on the system board (see "System board" on page 7). The battery is circular and has the positive pole mark (+) on the top.



6. Using your fingers to grasp the sides of the battery, carefully remove the battery from its socket.

7 Press the new battery in the socket with the positive pole up. Make sure you have pressed the battery down far enough for it to contact the base of the socket.

8 Replace the right side panel. (See “Replacing the side panels” on page 23 for more information.)

9 Reconnect the power cord and all other cords you removed, then turn on the system.

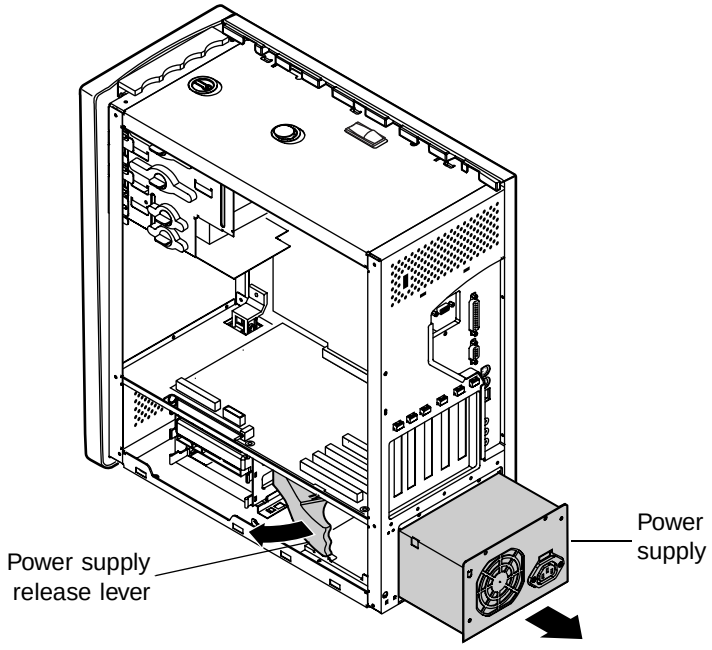
10 Using the data you recorded in Step 2, enter the BIOS Setup utility, then make sure that the system configuration is correct. If the CMOS data is not correct, change the information in the setup screens as necessary.

Replacing the power supply

Observe the following instructions for removing the power supply and installing a new one. Your power supply can be removed without disconnecting power supply cables or removing screws.

To replace the power supply:

1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right panel. (See "Removing the side panels" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Pull the power supply release lever away from the chassis. This releases the power supply from its connector and moves it out from the back of the chassis.



4. From the rear side of the chassis, pull the power supply out and away from the chassis.

5. Make sure that the voltage switch on the back of the new power supply is set to the correct voltage for your area.
6. Insert the new power supply and slide it into the chassis until it engages the connector.
7. Push the release level all the way in to secure the power supply.
8. Replace the right side panel. (See “Replacing the side panels” on page 23 for more information.)
9. Reconnect the power cord and all other cords you removed, then turn on the system.

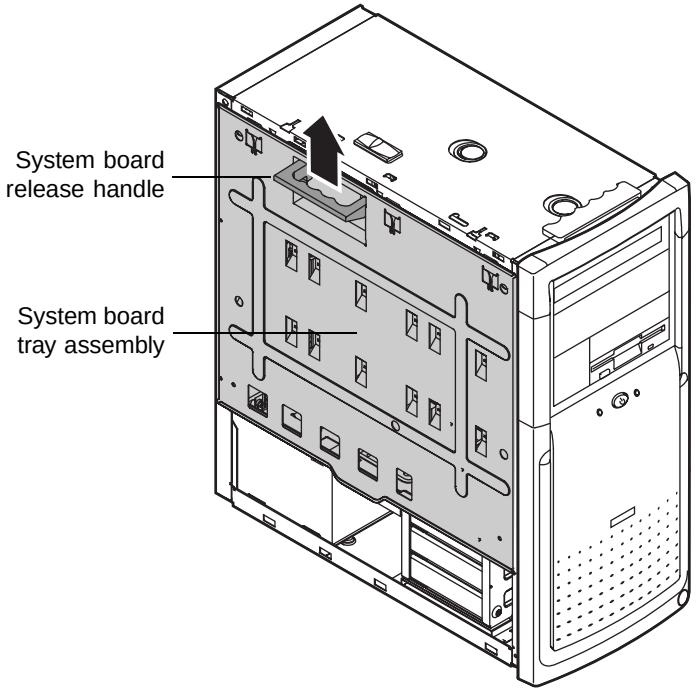
If the system does not start, make sure that you installed the power supply correctly and that the voltage connector on the back of the power supply is correctly set.

Replacing the system board

The system board is installed on a system board tray assembly. To remove the system board, you must first remove the system board tray assembly from the chassis. The tray assembly can be removed from the chassis without tools. The I/O shield is attached to the system board tray assembly and does not have to be removed when you remove the system board.

To remove the system board tray assembly:

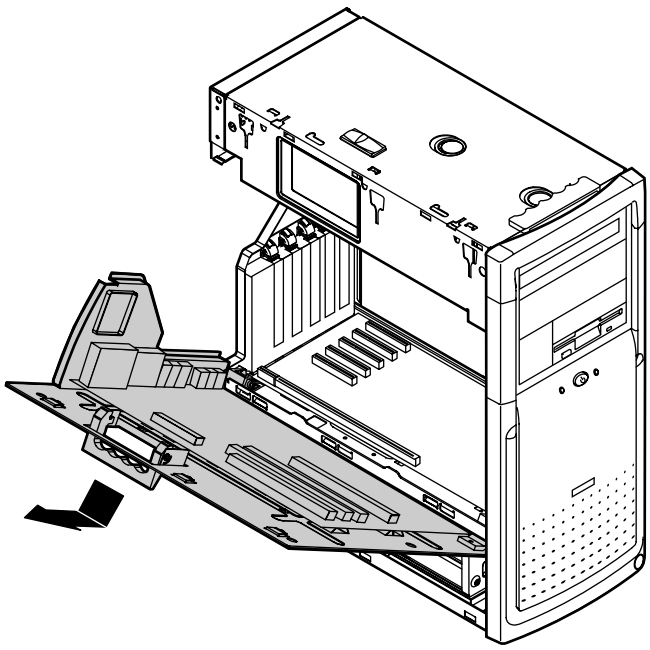
1. Turn off the computer, disconnect the power cord, modem cord (if installed), and all external peripheral devices.
2. Remove the right and left side panels. (See "Removing the side panels" on page 19 for instructions. Also observe the "Static electricity precautions" on page 17.)
3. Locate the system board release handle at the top of the system board tray assembly. Lift the handle up to disconnect the system board from the riser card and unlatch the tray assembly from the chassis.



4 Grasp the handle, lower the tray assembly slightly, then support the bottom or back of the tray assembly with your other hand and pull it away from the chassis.

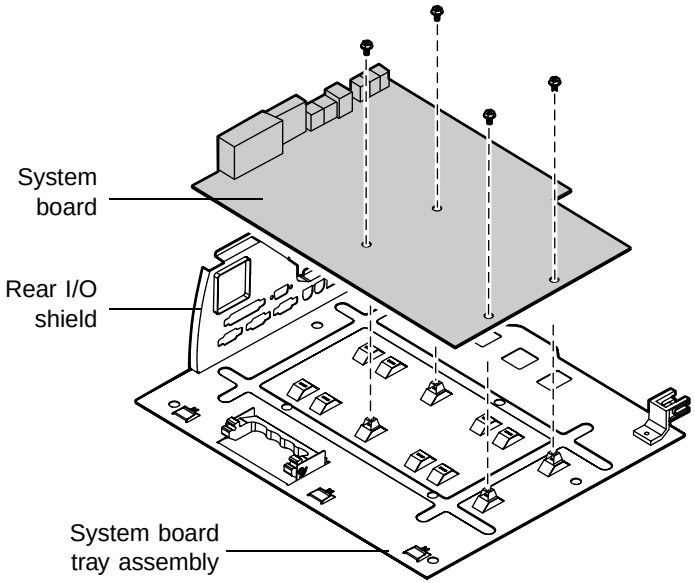
Warning

Do not release the tray assembly until you have lifted it off the hinges and can safely place it on a work surface. The hinges are designed to make it easy for you to lift the tray assembly away from the chassis, but the hinges can be damaged if the tray assembly is allowed to hang open or is lowered too far.



To replace the system board:

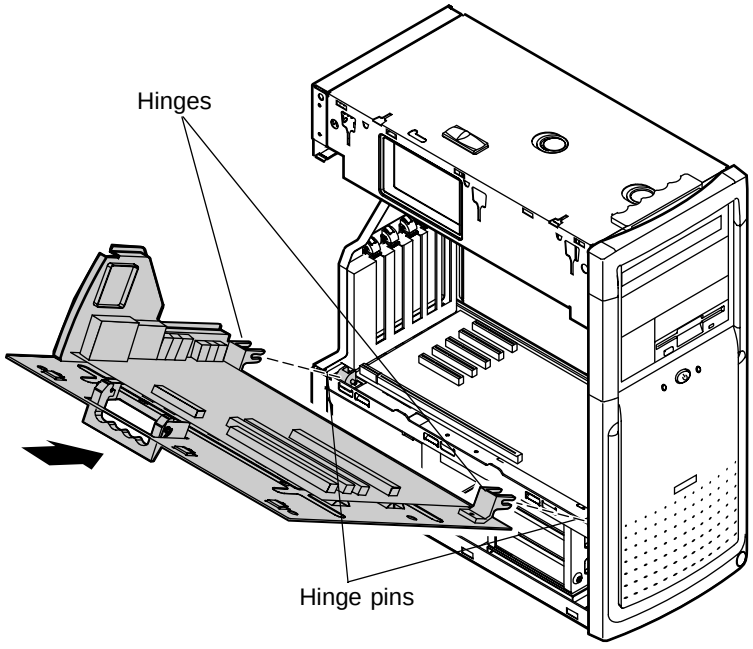
1. Remove or disconnect the following devices from the system board:
   - Processor. (See “Replacing the processor” on page 61 for instructions.)
   - DIMMs. (See “Adding or replacing memory” on page 45 for instructions.)
   - AGP graphics card. (See “Replacing the AGP card” on page 51.)
   - Devices from the old system board that are not included with the new board, such as processor retention brackets.
2. Remove the four screws that attach the system board to the system board tray assembly, then lift out the system board.
3. Remove the new system board from its packing material.



4. Install the new board onto the system board tray assembly, carefully aligning the ports and connectors with the holes on the rear I/O shield.
5. Reinstall the four screws to secure the board to the tray assembly.

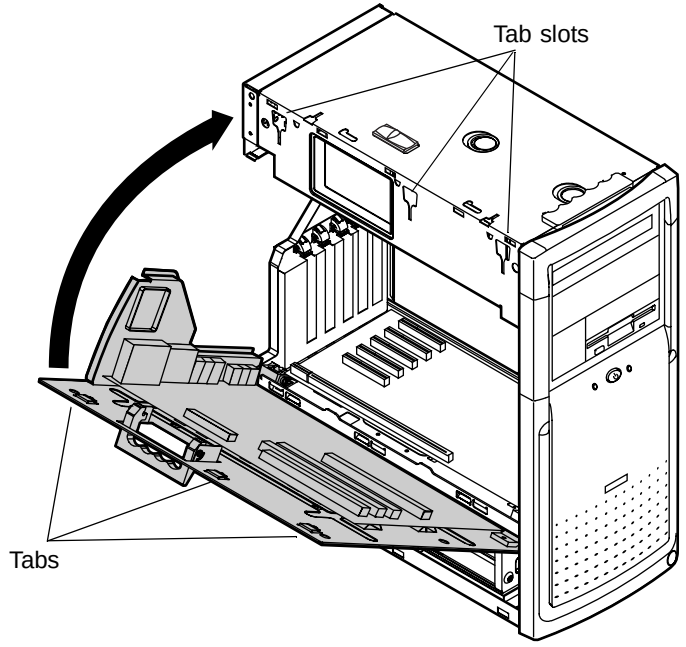
To replace the system board tray assembly:

1. Align the two hinges on the sides of the system board tray over the pins on the chassis.



2. Move the release handle on the tray assembly to an outward position.

3 Push the tray assembly toward the chassis until the three tabs at the top of the tray assembly are seated in the corresponding slots on the chassis.



4 Push the handle in and slide the tray assembly downward until it locks the tray in place.

5 Turn the chassis around and press down on the top edge of the system board to make sure that it is firmly seated in the riser card slot.

6 Replace or reconnect the following devices:

- Processor. (See “Replacing the processor” on page 61.)
- AGP graphics card. (See “Replacing the AGP card” on page 51.)
- Peripheral devices attached to the rear-panel I/O connectors.
- Devices from the old system board that are not included with the new board. (See “System board” on page 7 for device locations.)

7 Replace the left and right panels. (See “Replacing the side panels” on page 23 for instructions.)

8 Reconnect the power cord and all other cords you removed, then turn on the system.

Replacing the processor

Your system board currently supports the Intel Celeron and Pentium III (FC-PGA 370) processors. See the Gateway Web site at www.gateway.com for updates on processor speeds supported by your system.

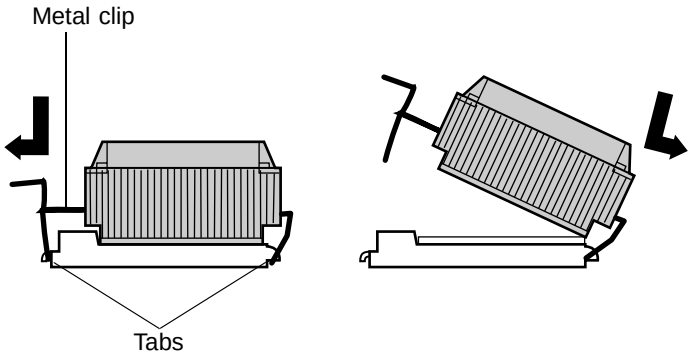
When replacing a processor, order a processor upgrade kit. The kit includes the processor and a heat sink..

Warning

It is critical that a heat sink be installed on the processor to provide sufficient cooling.

To replace the processor:

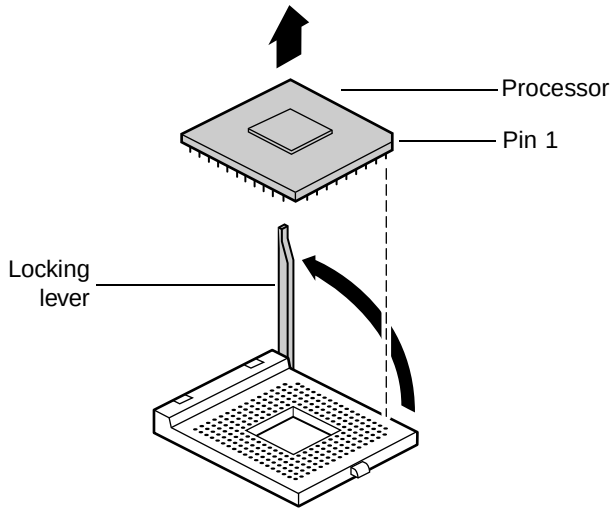
1. Turn off the computer, disconnect the power cord, and disconnect the modem cord, if your computer has a modem.
2. Open the case by following the instructions on page 19, observing the static electricity precautions on page 17.
3. Remove the heat sink:
   a. Disconnect the fan cable from the fan connector on the system board. (See “System board” on page 7 for the location of the fan connector.)
   b. The heat sink is attached to the processor socket by a metal clip. Unhook the clip from the tab on the processor socket by pressing down on the clip and then pulling out on the clip.



c Lift the heat sink at an angle and unhook the clip from the other tab. Lift the heat sink off the processor.

4 Remove the processor:

a Open the locking lever on the processor socket by moving the lever slightly out to the side and then lifting it up 90 degrees.



b Lift the old processor straight up and out of the socket.

5 Install the new processor:

a Hold the new processor over the empty processor socket and verify that pin 1 on both the processor and the socket are aligned. Pin 1 is near the cut out corner.

b Gently place the new processor into the socket.

c Secure the processor by lowering the locking lever until the lever latches into place. The processor will slip into place without pressure when aligned correctly.

6 Replace the heat sink:

   a Hook the metal clip on the heat sink to the tabs on the processor socket. Make sure the heat sink is level with the processor and the metal clips are securely attached.

Caution

It is very important that the heat sink makes direct contact with the processor or else it will not cool correctly, resulting in processor failure.

   b Connect the heat sink fan cable to the fan connector on the system board.

7 Close the case. (See "Closing the case" on page 23 for instructions.)

8 Reconnect the cords you removed, then turn on the computer.

You do not have to manually adjust the processor speeds. Your system BIOS automatically detects the processor speed for you.

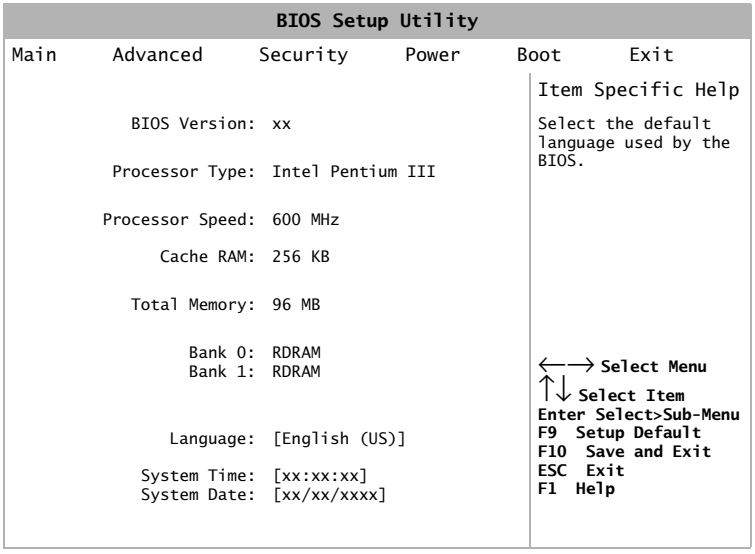
Using the BIOS Setup Utility

6

About the BIOS Setup utility

The computer's BIOS has a built-in setup utility that lets you configure several basic system characteristics. The settings are stored in battery-backed RAM and are retained even when the power is off.

Enter the BIOS Setup utility by restarting the computer, then pressing F1 when prompted during the startup process. The Main BIOS Setup utility screen (which may not look exactly like the screen shown below) opens.



As you select items on the Main menu, or in submenus, you will see specific information related to the current selection in the Item Specific Help box. Refer to the Help box for information about the menu options.

The command bar shows the keystrokes necessary to access help, navigate through the menus, and perform other functions.

- F1 opens the Help screen, providing general help for using the BIOS Setup utility.
- The ↑ (up arrow) and ↓ (down arrow) keys select items in the menu.
- The ← (left arrow) and → (right arrow) keys move you between the menus.
- ENTER either moves you to a submenu screen when a selected item is preceded by > or activates a selected field.
- ESC closes the screen you are in and returns you to the previous screen or exits you from the BIOS Setup utility.
- F9 opens a screen that lets you return all values to their default settings.
- F10 opens a screen that lets you save all parameters and then exit the BIOS Setup utility.

The main screen has the following menu selections at the top of the screen:

- **Main** gives you access to basic information and settings related to your system hardware and configuration.
- **Advanced** gives you access to information and settings for system resources, hardware, and system configuration.
- **Security** gives you access to settings related to system access passwords.
- **Power** gives you access to information and settings for power management features.
- **Boot** gives you access to information and settings for boot features and boot sequences.
- **Exit** gives you access to options for exiting the BIOS Setup utility.

Refer to the Help box on the right side of the BIOS Setup screens for information about menu items.

Updating the BIOS

If you need a new version of the BIOS, you can download the BIOS update from technical support on the Gateway Web site (www.gateway.com) and install the new version from a diskette.

To update the BIOS you need to perform the following tasks in sequence:

- Create a bootable diskette
- Note the current BIOS settings
- Create the BIOS update diskette
- Update the BIOS
- Restore the BIOS settings

To create a bootable diskette:

1. Enter DOS and type the following at the DOS prompt: **format a: /s**
1. Put a blank diskette in the diskette drive, then press ENTER.
2. Follow the instructions on the screen.

To note the current BIOS settings:

1. Remove the bootable diskette and restart your computer.
2. Enter BIOS Setup by pressing F1 when prompted during startup.
3. Write down the settings for each of the fields. (At the end of the BIOS update process, you will reset the fields back to the values you recorded.)
4. Exit the BIOS Setup utility.

To create the BIOS update diskette:

1. Log on to the Internet.
2. Download the correct BIOS file from the technical support area of **www.gateway.com**.
3. Decompress the contents of the BIOS file you downloaded and copy the contents onto the bootable diskette.

To update the BIOS:

1. Place the bootable diskette containing the BIOS files into drive A:, then restart the computer. The BIOS Setup utility starts.
2. Press ENTER. The **Main** menu opens.
3. Select **Update Flash Memory From a File**, then press ENTER.
4. Select **Update System BIOS**.
5. Press TAB to select the file name, then press ENTER. The computer warns you that the BIOS is about to be changed and asks you to confirm the BIOS version.
6. Press ENTER. The BIOS files are loaded.
7. Once the BIOS files have been loaded, remove the diskette from drive A:, then press ENTER when prompted to restart the computer.
8. As the computer starts up, verify that the number of the BIOS version reported on the screen is the number of the new BIOS you downloaded from the Internet.

To restore the BIOS settings:

1. Enter BIOS Setup by pressing F1 when prompted during startup.
2. Once in BIOS Setup, press F9 to load the BIOS Setup utility default settings.
3. Select any BIOS fields you want to change by using the ↑ (up arrow) and ↓ (down arrow) keys. Press ENTER, then reenter the values you wrote down at the beginning of this process.

Setting the system board jumpers

The J6C1 configuration jumper on the system board lets you clear passwords and recover the BIOS. (See the figure on page 7 for the location of the jumper.) The table below shows the settings required to perform those tasks. Make sure you turn off the computer and unplug the power cord before moving the jumper.

Caution

Moving the jumper while the computer power is on can damage your computer. Always turn off the computer and unplug the power cord from the computer before changing the jumper.

J6C1 Mode	Jumper Setting	Action When Set
Normal	Pins 1-2	Normal operation
Configure	Pins 2-3	Adds a Maintenance menu to BIOS Setup utility with options to clear passwords
Recovery	No jumper	Causes computer to attempt BIOS update or recovery from diskette

Recovery mode

If you are trying to update the BIOS and have a problem such as a power outage, the update may not be successful. You can then attempt to recover the BIOS by setting the J6C1 jumper.

When you are attempting to recover the BIOS, no image appears on your monitor.

To recover the BIOS:

1. Turn off the computer, disconnect the power cord, then disconnect the modem cord, if your computer has a modem.
2. Open the case. (See "Opening the case" on page 19 and observe the "Static electricity precautions" on page 17.)
3. Remove the jumper from the J6C1 jumper (See "System board" on page 7 for location) and set it aside. You will need it in a later step.
4. Close the case (See "Closing the case" on page 23 for instructions.), then reconnect the power cords.
5. Place the bootable diskette containing the BIOS files into drive A:, then turn on the computer.

   At the start of the BIOS recovery process, the computer beeps once. The recovery process may take a few minutes.
6. When you hear two beeps, the BIOS has successfully recovered. Remove the diskette from drive A:, turn off the computer, then disconnect the power cord.

   If you do not hear two beeps, the BIOS recovery was not successful. See the troubleshooting section below for further information.
7. Open the case again (See "Opening the case" on page 19 and observe the "Static electricity precautions" on page 17.)
8. Place the jumper back on pins 1-2 on the J6C1 jumper.
9. Close the case, reconnect the cords, then turn on the computer.
10. Enter BIOS Setup utility by pressing F1 when prompted during startup. Once in BIOS Setup utility, press F9. The default settings for the BIOS Setup utility are loaded.
11. Select a BIOS field that you want to change by using the ↑ (up arrow) and ↓ (down arrow) keys. Press ENTER, then reenter the values you wrote down at the beginning of the BIOS update process.

Troubleshooting: If the BIOS recovery was unsuccessful the computer will beep continuously or will not beep at all. If the computer beeps continuously, make sure all the BIOS files you downloaded are on your diskette. If the computer does not beep at all and the diskette drive light stays on, make sure your BIOS update diskette is a bootable diskette. If you continue to have problems, contact Client Care or your system administrator.

Managing Your System

7

Protecting against power source problems

Surge suppressors, line conditioners, and uninterruptible power supplies (UPS) can help protect your system against power source problems.

Surge suppressors

During a power surge, the voltage level of electricity coming into your system can increase far above normal for a few milliseconds. Data may be lost or the system may be damaged. To protect against power surges, use a surge suppressor. The surge suppressor absorbs voltage surges and prevents them from reaching your system.

A surge suppressor plugs directly into an electrical outlet. Your computer, monitor, and other devices are connected to the surge suppressor.

If you have a modem, make sure your surge suppressor has jacks for the telephone and modem cables. Power surges can pass through telephone wires as well as electrical wires.

When purchasing a surge suppressor:

- Make sure the surge suppressor meets the appropriate product safety certification for your location, such as Underwriters Laboratories (UL).
- Check the maximum amount of voltage the suppressor allows to pass through the line. The lower the voltage that the suppressor allows to pass through, the better the protection for your system.
- Check the energy absorption, or *dissipation,* rating. The higher the energy absorption rating, the better the protection for your system.
- Check for line-conditioner capabilities. A line conditioner smooths out some of the normal line noise (small voltage fluctuations) of an electrical supply.

Line conditioners

A line conditioner protects your system from the small daily fluctuations in voltage from an electrical supply. Most systems can handle this variation, or *line noise,* without problems. However, some electrical sources include more line noise than normal. Line noise can also be a problem if your system is located near, or shares a circuit with, a device that causes electromagnetic interference, such as a television or a motor.

Some surge suppressors and uninterruptible power supplies include simple line-conditioning capabilities.

Uninterruptible power supplies

You may lose data during a total power failure. A standby Uninterruptible Power Supply (UPS) uses a battery to keep your system running during a power failure. The UPS enables you to shut down your system normally, but not run the system for an extended time.

If you purchase a standby UPS, make sure the UPS includes surge suppression and line-conditioning features.

Maintaining and managing your hard drive

Regular maintenance can keep your hard drive operating efficiently, and good file management can keep your system free of unwanted files while making important files secure and easier to find.

Hard drive maintenance utilities

By regularly using the following utilities, you can help maintain the performance of your hard drive:

- ScanDisk (Windows 95 and Windows 98)
- Check Disk (Windows NT)
- Disk Defragmenter (Windows 95 and Windows 98)

Using ScanDisk in Windows 95 and Windows 98

Bad sectors are parts of a hard drive or diskette that will not hold data. A lost allocation unit is a group of sectors that has lost its place in the table that the operating system uses to locate files. ScanDisk checks the hard drive for bad sectors or lost allocation units and lets you fix them.

Use ScanDisk from once a week to once a month, depending on how often you use your system. Also use ScanDisk if you have any hard drive problems.

To use ScanDisk:

1. Double-click the **My Computer** icon on the desktop. The My Computer window opens.
2. Click the drive you want to check.
3. Select **File**, then **Properties**. The drive's properties window opens.
4. Click the **Tools** tab.
5. At **Error-checking status**, click **Check Now**. The ScanDisk window opens.
6. Select the options you want for checking the drive.
7. If you want ScanDisk to check more than one drive, press and hold SHIFT, then click on the additional drives in the list of drives to check.

8 Click **Start**. ScanDisk checks the drive for errors.

9 Follow any instructions on screen for completing the scan.

Using Check Disk in Windows NT

Bad sectors are parts of a hard drive or diskette that will not hold data. A lost allocation unit is a group of sectors that has lost its place in the table that the operating system uses to locate files. Check Disk checks the hard drive for bad sectors or lost allocation units and lets you fix them.

Use Check Disk from once a week to once a month, depending on how often you use your system. Also use Check Disk if you have any hard drive problems.

To use Check Disk:

1 Double-click the **My Computer** icon on the desktop. The My Computer window opens.

2 Click the drive you want to check.

3 Select **File**, then **Properties**. The drive properties window opens.

4 Click the **Tools** tab.

5 At **Error-checking**, click **Check Now.** The Check Disk window opens.

6 Select the options you want for checking the drive. Check **Scan for and attempt recovery of bad sectors** to scan the entire hard drive.

7 Click **Start.** Check Disk checks the drive for errors.

8 Follow any instructions on screen for completing the scan.

Using Disk Defragmenter in Windows 95 and Windows 98

When working with files, Windows may divide the files into pieces and store the pieces at different places on the hard drive. This division of files, called *fragmentation*, is normal. However, to access a file, the hard drive must search for the pieces of the file and put the file back together, which can slow down your system.

Disk Defragmenter brings all the separate pieces back together. Defragment your computer frequently to improve system performance.

Log off network connections before starting Disk Defragmenter, or network communication may stop the defragmentation process and restart it at the beginning. Also, do not use your keyboard or mouse during the defragmentation process or the process may stop and restart at the beginning.

Important

A disk defragmentation utility does not ship with Windows NT, but you can purchase one. If you purchase a defragmentation program, make sure it can defragment the NT File System (NTFS).

To use Disk Defragmenter:

1. Double-click the **My Computer** icon on the desktop. The My Computer window opens.
2. Click the drive you want to check.
3. Select **File**, then **Properties**. The drive's properties window opens.
4. Click the **Tools** tab.
5. At **Defragmentation status**, click **Defragment Now**. The defragmentation process begins. If your drive has a high percentage of fragmentation, it may take a half-hour or longer to defragment it, depending upon the size of the hard drive.

Hard drive management practices

By deleting unneeded files from your hard drive and managing the space that is automatically allocated for saving certain files, you can help maintain the performance of the hard drive.

Checking hard drive space

In Windows, you can see a chart of the available hard drive space.

To check hard drive space:

1. Double-click on the **My Computer** icon on the desktop. The My Computer window opens.
2. Click the drive you want to check.
3. Select **File**, then **Properties**. The drive's properties window opens. The **General** tab shows you the available and used space on the drive.

Backing up files

Regularly backing up your files protects you from losing data and lets you keep fewer files on your hard drive. Back up old files to a large capacity disk drive or tape drive and delete the files from your hard drive. You can use the software that came with your tape backup drive or your large capacity disk drive to back up the files.

You can also back up files by running the Backup utility that came with your operating system. In Windows 95 and Windows 98, Backup copies files to diskettes or a tape drive. In Windows NT, Backup copies files to a tape drive.

To run Backup in Windows 95 and Windows 98:

1. Click **Start,** then select **Programs**, **Accessories**, **System Tools**, then **Backup**.
2. Follow the instructions on the screen.

To run Backup in Windows NT:

1. Click **Start,** then select **Programs**, **Administrative Tools**, then **Backup**.
2. Follow the instructions on the screen.

Deleting unneeded files

By deleting unneeded files from the hard drive, you free up space on the hard drive and help improve hard-drive performance. The following sections give you some simple ways to delete unneeded files.

Deleting Windows temporary files

During normal operation, Windows constantly creates new temporary (temp) files. You can safely delete all but the most recent temp files.

To delete temp files:

1. Open Explorer, select **Tools**, then **Find**, then **Files and Folders**.
2. At **Named**, type ***.tmp**
3. In the **Look in** drop-down list, select your drive letter.
4. Click **Find Now**. The list of temp files is generated.

5 Click **Modified** above the list. To see the **Modified** button, you may need to maximize the Find window.

   The list is sorted by date.

6 Highlight all the files in the list except those with today's date.

7 Press DELETE.

Deleting temporary Internet files

As you visit Web sites, your browser stores temporary Internet files on your hard drive in a *memory cache* and a *disk cache*. Files in the memory cache are removed when you turn off your computer. Files are saved in the disk cache until the space designated for the cache is full. See your browser's Help files for instructions on emptying the disk cache.

You can save space on the hard drive by decreasing the size of the Internet file disk cache. See your browser's Help files for instructions.

Emptying the Recycle Bin

When you delete a file from your hard drive in Windows, it is not immediately removed from the hard drive. Instead, the file is moved into the Recycle Bin. Because files are stored in the Recycle Bin and not deleted from the hard drive immediately, you can retrieve a file that you accidentally delete from the hard drive.

To delete all the files from the Recycle Bin, right-click the **Recycle Bin** icon on the desktop, then select **Empty Recycle Bin**.

You can save space on the hard drive by decreasing the size of the Recycle Bin.

To decrease the size of the Recycle Bin:

1 Right-click the **Recycle Bin** icon on the desktop.

2 Select **Properties**. The Recycle Bin Properties window opens.

3 At the Global tab, select either **Configure drives independently** or **Use one setting for all drives.**

4 If you are configuring drives independently, click the tab for the drive you want to configure.

5 Move the slider to set the size of the Recycle Bin. 5% is a good initial setting.

6 Click **OK**.

System integrity

Your system must be protected against electrical problems and physical hazards such as heat, moisture, and dust. Also protect it against less obvious hazards such as viruses and hardware overloads.

Protecting against viruses

A *virus* is a program written with malicious intent for the purpose of creating havoc in a computer system.

Viruses spread through executable files, document macros, or boot sectors. Diskettes used in a contaminated computer can get a virus and transfer the virus when used in another computer. A virus can also spread through files downloaded from bulletin boards or the Internet.

Some viruses may only cause your system to beep or display messages or images on the screen. Other viruses are highly destructive, and corrupt or erase the contents of your files or diskettes. To be safe, never assume any virus is harmless. Always protect your system against viruses.

To protect your system against viruses:

- Use Norton's® AntiVirus to scan your computer regularly. Make sure to update Norton's® AntiVirus periodically to keep up with new viruses.
- Make backup copies of all files and write-protect the diskettes. A virus cannot infect a write-protected diskette.
- Obtain all software from reputable sources and always scan new software for any viruses before installing it.
- Be cautious about files you receive in e-mail or download from a network or the Internet. If you download a file, use your virus checking software to scan the directory on your computer that contains the downloaded file before you open the file.
- If you have doubts about the source of a Microsoft® Word or Excel file, disable the file macros before opening the file. Word and Excel are set by default to warn you if a document you are about to open contains a macro that might have a virus.

To remove a virus:

1. If you suspect your system has been infected with a virus, find and remove the virus immediately using an antivirus program.
2. Turn off your computer and leave it off for at least 30 seconds.
3. Turn on the computer and rescan for the virus. If the virus is still on your computer, contact your system administrator or Client Care.

Checking system health with LANDesk

LANDesk® Client Manager is a desktop management interface (DMI) that lets you monitor the health of your system components. Through LANDesk, you can view software and hardware properties. You can also set LANDesk to notify you when system resources reach certain levels.

To install LANDesk Client Manager:

1. In the C:\DMI folder on your hard drive, double-click the **Setup** icon to launch the InstallShield® wizard.
2. Follow the instructions that appear on the screen. If you are prompted for a password during the installation process, type **lowtco**.

LANDesk Client Manager comes with complete electronic documentation and online help. Refer to these documents and the program's Help for more information.

If you need to restore LANDesk from the *System Restoration CD* and are prompted for a password, type **lowtco** and press ENTER.

System recovery

Take advanced precautions that will allow you to restart your system and recover damaged files in the event that your hard drive is damaged, or your BIOS or system files get corrupted.

Creating a startup diskette

If your computer hard drive is damaged, you may not be able to start the computer from the hard drive. A *startup diskette* is a bootable diskette that enables you to start the computer and attempt to fix the problem.

When you set up Windows 95 or Windows 98, you are prompted to create a startup diskette. You can also create a startup diskette in Windows 95 or Windows 98 at any time.

To create a startup diskette:

1. Click **Start**, then select **Settings**, then **Control Panel**. The Control Panel Window opens.
2. Double-click **Add/Remove Programs**. The Add/Remove Program Properties window opens.
3. Click the **Startup Disk** tab.
4. Insert a diskette into the diskette drive, then click **Create Disk**.
5. Follow the directions on the screen.

Keeping a record of system configuration

In Windows 95 and Windows 98 you can print a summary of the configuration of your system and the memory allocation. This printed summary can provide information to reset your system configuration properly if the information is lost, or help you troubleshoot your system.

To print a system summary:

1. Right-click the **My Computer** icon on the desktop.
2. Select **Properties**. The System Properties window opens.
3. Click the **Device Manager** tab.

4 Click **Print.**

5 In **Report type**, select **All devices and system summary.**

6 Click **OK**.

Using your System Restoration CD

The *System Restoration CD* included with your system can be used to:

- Install hardware drivers for Windows 95, Windows 98 and Windows NT
- Reinstall selected software applications, such as LANDesk Client Manager

Instructions for each operating system are provided with the *System Restoration CD*.

System power management

The power-management features supported by your system are described in the following sections.

About soft-off

When you turn off your computer by following the Windows shutdown procedure or pressing the power button, a small amount of power (less than 5 watts) still runs to the wakeup circuitry on the system board. In this *soft-off* state, your computer can still respond to an incoming signal from the modem or to certain LAN commands.

To remove all power from your computer, turn off the computer and unplug the power cord. When you plug the power cord back in, the network connection LEDs may flash and the fan may start before you press the power button. This is normal.

Using Suspend in Windows 95

Suspend is a power-management feature that can reduce power by shutting down the hard drive and reducing or turning off power to the monitor. When the system is in Suspend, it appears to be off. The computer's power LED turns amber and the monitor goes dark, indicating that the system has entered Suspend. However, some wakeup events can bring the system out of Suspend.

When you resume from Suspend, the system returns to the state it was in without going through the normal startup routine.

Adding a Suspend option to the Start menu

If it's not already shown in the Start menu, you can add an option that puts your system into Suspend:

Important

If your system is part of a Novell network, putting your system in Suspend disconnects you from your network connection. Reestablish your network connection when you take your system out of Suspend.

To add a Suspend option to the Start menu:

1. Click **Start**, select **Settings**, then click **Control Panel**. The Control Panel window opens.
2. Double-click **Power**. The Power Properties window opens.
3. On the **Power** tab, click **Advanced**. The Advanced Properties window opens.
4. On the **Advanced** tab, check the option **Show Suspend command on Start menu**.
5. Click **OK**.

After you have added the **Suspend** option to the **Start** menu, you can put your system into suspend from a normal working state by clicking **Start**, then clicking **Suspend**.

Taking your system out of Suspend

You can take your system out of Suspend by pressing any key on the keyboard or by moving the mouse. (A PS/2 or USB keyboard or mouse can bring the system out of Suspend.) The power LED turns green and your system returns to the state it was in before it entered Suspend.

To reestablish your network connection:

1. Click **Start**, then click **Shut Down**.
2. Select **Close all programs and log on as a different user**. Selecting this option bypasses the restart process and displays your network logon dialog box.
3. Type your password, then click **OK**. Your logon script runs and your network connections are reestablished.

For more information about power management, see your Windows 95 Help or Windows documentation.

Using Standby in Windows 98

Windows 98 supports two standards of power management, Advanced Power Management (APM) and Advanced Configuration and Power Interface (ACPI).

The Standby mode, available through both APM and ACPI, saves power by spinning down the hard drive, and by reducing or turning off power to the monitor. ACPI lets your system save additional power in Standby by controlling the power usage of individual devices, add-in boards, and hard drives.

When the system is in Standby, it appears to be off. The computer's power LED turns amber and the monitor darkens, indicating that the system has entered Standby. However, some wakeup events can bring the system out of Standby.

Important

If your system is part of a Novell network, putting your system in Standby disconnects you from your network connection. Reestablish your network connection when you take your system out of Standby.

Checking the type of power management on your system

ACPI is available only if Windows 98 was installed with ACPI enabled. If Windows 98 was not installed with ACPI enabled, APM power management is available.

To check the type of power management on your system:

1. Click **Start**, then select **Settings**, then **Control Panel**. The Control Panel window opens.
2. Double-click **System**. The System Properties window opens.
3. Click the **Device Manager** tab, then double-click **System devices**. The type of power management supported appears at the top of the list under **System devices**.

If you want to enable ACPI in Windows 98, see the Microsoft Web site for instructions.

Putting your system into Standby (S1)

You can put your system into Standby by clicking **Start**, then selecting **Shutdown**, **Standby**, then clicking **OK**. This procedure puts your system into Standby with both APM and ACPI.

If ACPI is enabled on your system, you can also set a timer or press the power button to put your system into Standby.

To set the standby timer:

1. Click **Start**, then select **Settings**, then **Control Panel**. The Control Panel window opens.
2. Double-click the **Power Management** icon. The Power Management Properties window opens.
3. On the **Power Schemes** tab, set the timer. Your system enters Standby when it has been inactive for the amount of time you set.

To set the computer's power button to put the system into Standby:

1. Click **Start**, then select **Settings**, then **Control Panel**. The Control Panel window opens.
2. Double-click the **Power Management** icon. The Power Management Properties window opens.

3 Click the **Advanced** tab.

4 Under **When I press power button on my computer**, select **Standby.**

5 Click **OK**.

After you have set the power button to be a standby button, the button functions in this way:

State of system	Length of time you press button	Result
Normal working state	Less than 4 seconds	System enters Standby
Normal working state	More than 4 seconds	Computer turns off
Standby	Less than 4 seconds	System returns to normal working state
Standby	More than 4 seconds	Computer turns off

Taking your system out of Standby

Do one of the following to take your system out of Standby:

- Press any key on the keyboard. (A PS/2 or USB keyboard can bring the system out of Standby.)
- If your system uses APM, move the mouse. (A PS/2 or USB mouse can bring the system out of Standby.)
- If you have set the power button to be a Standby button, press the power button for less than 4 seconds.

The power LED turns green, and your system returns to the state it was in before it entered Standby.

To reestablish your network connection:

1 Click **Start**, then select **Shut Down**, then **Close all programs and log on as a different user**. Selecting this option bypasses the restart process and displays your network logon dialog box.

2 Type your password, then click **OK**. Your logon script runs and your network connections are reestablished.

See your Windows 98 Help or documentation for more information on using power management

Cleaning Your System

8

Cleaning the mouse

If the mouse pointer on the screen moves erratically when you move the mouse, the inside of the mouse may be dirty.

To clean the mouse:

1. Turn off the computer, then disconnect the mouse cable from the mouse port.
2. Turn your mouse upside down, then remove the roller ball cover.
3. Cup your hand under the mouse, then turn your mouse right-side up. The roller ball should drop into your hand. If it does not, gently shake the mouse until the ball drops out of the socket.
4. Use adhesive tape to pick up any dust or lint on the surface of the ball. Wipe away dirt or lint inside the ball socket with a lint-free cloth. You can also blow into the socket to remove dirt and lint. Use a cotton swab dipped in isopropyl alcohol to clean the rollers inside the socket.
5. Let surfaces dry completely.
6. Return the ball to the socket and replace the cover.

Cleaning the keyboard

You should clean the keyboard occasionally to free it of dust and lint particles trapped under the keys. The easiest way to do this is to blow trapped dirt from under the keys using an aerosol can of air with a narrow, straw-like extension.

If you spill liquid on the keyboard, turn off the computer and disconnect it. Turn the keyboard upside down to let the liquid drain. Let the keyboard dry for a few days before trying to use it again. If the keyboard does not work after it is dry, you may need a new one.

Cleaning the monitor screen

Use a soft cloth and window cleaner to clean the monitor screen. Spray a small amount of cleaner on the cloth (never directly on the screen), and wipe the screen with the cloth.

Cleaning the computer and monitor cases

Warning

When you clean the system, turn off the computer, monitor, and peripherals and unplug the power cord and modem cord (if installed). Be careful not to drip liquid into the computer, monitor, and peripherals when cleaning the system.

Always turn off the computer and other peripherals before cleaning any components.

Use a damp, lint-free cloth to clean the computer case, monitor case, keyboard, speakers, and other parts of your system. Avoid abrasive or solvent cleaners because they can damage the finish on your components.

Your computer is cooled by air drawn in through the vents on the chassis and blown out through the power supply exhaust fan. Keep vents on the front and back of the chassis free of dust. With the computer turned off and unplugged, brush the dust away from the vents with a slightly damp cloth. Be careful not to drip any water into the vents. Do not attempt to clean dust from the inside the computer.

9 Troubleshooting

Introduction

If your system does not operate correctly, re-read the instructions for the procedures you have performed. If an error occurs within an application, consult the documentation supplied with the software. This section identifies solutions to some possible problems.

Troubleshooting checklist

Before turning on the system, make sure that:

- The power cord is connected to the AC power-in connector and an AC outlet.
- The AC outlet is supplying power.
- If a power strip is used, it is turned on, and the circuit breaker is set.
- The voltage selection switch on the system power supply reflects the proper voltage.

Verifying your configuration

If your system is not operating correctly, the BIOS may contain an invalid configuration parameter. Enter the BIOS Setup utility program and check your configuration settings.

Troubleshooting guidelines

As you troubleshoot your system, keep the following guidelines in mind:

- Never remove the chassis cover while the computer is turned on.
- Do not attempt to open the monitor. Even if the monitor's power is disconnected, stored energy within the monitor's components can offer a painful or harmful shock.
- If a peripheral, such as the keyboard, mouse, drive, or printer does not appear to work, make sure that all connections are secure.
- If an error message displays on the screen, write it down, word for word. You may be asked about it when calling technical support.
- Only qualified personnel should open the system for maintenance.
- If you feel you are qualified to maintain the system yourself, make sure you are properly grounded before opening the system chassis. See "Static electricity precautions" on page 17 for more information on preventing electrostatic damage to the system.

CD/DVD drive problems

An audio CD produces no sound.

Probable Cause	Solution
The CD is loaded incorrectly.	Make sure the label is facing upward, then try again.
The speakers are not connected.	Check the speaker cables. Make sure they are connected properly and securely.
The speaker volume is turned down.	Check the volume control.
The speakers may be muted through the Multimedia volume control.	Double-click the speaker icon on the task bar. Make sure the **mute** box is not selected.
The speakers may be faulty.	Connect a set of headphones to the line out jack to test the output. If they work, replace the speakers.
The sound card may not be installed correctly.	Open the system, then reseat the sound card. Make sure the cables are connected properly.
The CD/DVD drive audio cable may be installed incorrectly.	Open the system and make sure the cables are connected properly.

Important

Some systems do not have sound cards because sound capabilities are built into the system board.

The CD/DVD drive is not recognized by the system.

Probable Cause	Solution
The CD is not intended for PC use.	Make sure the CD is PC compatible.
The CD is loaded incorrectly.	Make sure the label is facing upward, then try again.

Probable Cause	Solution
The CD is scratched or dirty.	Try cleaning the CD with a lint-free cloth. Check the CD for scratches.
The CD/DVD drive needs to be added as new hardware.	From the Control Panel window (**Start | Settings | Control Panel**), double-click **Add New Hardware**. Follow the directions for adding the drive.
The secondary IDE device may be disabled.	Restart your computer, then press F1 to enter the BIOS Setup utility program. From the **Advanced | IDE Configuration** menu, set the **IDE Controller** to **Both** and the **Secondary IDE Master** to **Auto**.
The CD cables are not installed correctly.	Open the system and check all cables between the CD controller and the CD/DVD drive.
The CD/DVD drive may be defective.	Replace the CD/DVD drive.

Hard drive problems

The SCSI drive is not recognized by the system.

Probable Cause	Solution
The SCSI bus is not properly terminated.	Make sure the last device on the SCSI chain is properly terminated.
The drive is configured with a conflicting SCSI address.	Change the device's SCSI address to one that is not currently being used by the system.
The cables are not connected correctly.	Open the system and check the cable connections.

The IDE drive is not recognized by the system.

Probable Cause	Solution
The primary IDE device may be configured incorrectly.	Restart your computer, then press F1 to enter the BIOS Setup utility program. From the **Advanced | IDE Configuration** menu, set the **IDE Controller** to **Both** and the **Primary IDE Master** to **Auto**.
The drive may not be configured properly.	Consult the hard drive user's guide for instructions on how to configure the drive.
The drive cables are not connected properly.	Open the system and check all cables connected to the controller card.
The drive controller is not seated properly.	Open the system and reseat the drive controller.

Important

Some systems do not have IDE controller cards because the IDE controller is built into the system board.

Memory/processor problems

Memory errors were detected during system start up.

Probable Cause	Solution
Memory was added or removed, and the new configuration was not saved in BIOS Setup utility.	Enter the BIOS Setup utility and save the new memory configuration.
The memory was installed incorrectly.	Check the memory for proper seating and orientation.
A memory chip is faulty.	Replace the card on which the faulty chip resides. Third-party diagnostic programs can help determine which chip or memory segment is failing.

A new processor is not recognized by the system.

Probable Cause	Solution
The processor was installed incorrectly.	Check the installation. The processor should be recognized automatically if it was installed correctly.
The processor speed was not set correctly in the BIOS Setup utility configuration mode.	If your system BIOS lets you select the processor speed, make sure you have selected the correct speed.
The processor was not seated correctly in the socket.	Make sure the processor is fully seated in its socket.

Modem problems

The modem is not recognized by the system.

Probable Cause	Solution
The modem has not been added as new hardware.	Add the modem as new hardware.
The modem is not connected to a live phone jack.	Make sure the line connected to the modem is live and plugged into the appropriate port on the modem (line port).
The modem is not configured with a valid interrupt or address.	Check the system settings for possible conflicts. If one exists, correct the problem by selecting an available interrupt and address.
The phone jack is shared by another modem or telephone.	If the modem shares the jack with another device, make sure the other device does not have the port open (for instance, someone is on the phone, or another modem is in use).

Peripheral/adapter problems

A SCSI device is not recognized by the system.

Probable Cause	Solution
The device needs to be added as new hardware.	From the Control Panel window (**Start** | **Settings** | **Control Panel**), double-click **Add New Hardware**. Follow the directions for adding the device. If you are not experienced with this procedure, call technical support.
The SCSI ID may be invalid.	Assign an available SCSI ID to the device.
The SCSI chain is not terminated.	Make sure the last device on the SCSI chain is terminated.
The device cables are not installed correctly.	Open the system and check all cables between the controller and the device.

The diskette drive is not recognized by the system.

Probable Cause	Solution
The diskette drive may be configured incorrectly.	Restart your computer, then press F1 to enter the BIOS Setup utility program. From the **Boot | Removable Devices** menu, make sure that the diskette drive parameters are set correctly.
The drive cables are not connected properly.	Open the system and check all cables connected to the controller card.
The drive controller is not seated properly.	Open the system and reseat the drive controller.

Important

Some systems do not have a floppy controller card because the floppy controller is built into the system board.

The diskette drive will not read, write, or format.

Probable Cause	Solution
The diskette is not IBM formatted.	Make sure the diskette you are trying to format is IBM compatible. If it is, try reformatting it.
The diskette is corrupted.	Run ScanDisk on the diskette. If errors are detected and corrected, try accessing the diskette again.
The diskette is write-protected.	Make sure the write-protection window on the upper-right corner of the diskette is closed (unprotected).

The diskette drive LED illuminates continuously.

Probable Cause	Solution
The diskette is corrupted.	Remove the diskette from the drive. If the light remains on, try restarting the system.
The cable to the drive is not connected properly.	Open the system and check the cable between the diskette drive and its controller. Make sure the pins are not bent or misaligned.

An adapter card is not recognized by the system.

Probable Cause	Solution
The interrupt and/or I/O address is set incorrectly.	Check the address configuration of the adapter card and make sure that it does not conflict with another card in the system.
The card was not configured through the software.	Configure the card with the appropriate software.
The card was not installed correctly.	Reseat the card and make sure that its jumpers are configured appropriately.

Printer problems

The printer will not turn on.

Probable Cause	Solution
The printer is not plugged in.	Check the power cable. Make sure it is plugged into a live power source.
The printer is not turned on.	Make sure the printer's power switch is depressed or set to the On position. If power is applied to the printer, the green power LED should be illuminated.
The printer is defective.	Try another printer, if one is available.

The printer is turned on but will not print.

Probable Cause	Solution
The printer is not connected to the system.	Check the data cable between the printer and the system. Make sure it is connected to the proper port. Check the connector and cable for bent or broken pins.
The printer is not designated as the default printer.	If the printer to which you are trying to print is not the default printer, make sure you have selected it through the application's printer setup function.
The printer has not been added to the system.	From the Printers window (**Start | Settings | Printers**), double-click **Add Printer**. Follow the directions for adding the new printer.

The printer prints garbled text.

Probable Cause	Solution
The wrong driver is being used for the selected printer.	From the Printers window (**Start | Settings | Printers**), select the printer. From the **File** menu, select **Properties**. Make sure the printer is using the right printer driver. If not, install the correct one.

System problems

The system will not start up.

Probable Cause	Solution
The system is not connected to an AC outlet.	Check the power cable(s) and make sure of the connection to an AC power source.
The voltage selection switch is not set correctly.	Make sure the voltage selection switch is set to the correct power source.

The system is non-responsive.

Probable Cause	Solution
An error occurs during an application or your system may be out of memory.	Restart your computer by pressing the reset button. If the system is still non-responsive, press and hold in the power button for 4 seconds to turn the system off. Turn the system back on and follow the onscreen instructions.

The keyboard does not work.

Probable Cause	Solution
A key was depressed while the system was starting up.	Clear the sticking key, then turn off the system, wait for a few seconds, then turn the system back on.
The keyboard is not plugged in or connected properly.	Check the cable. Make sure it is plugged in correctly.
Something spilled into the keyboard.	Turn off the system. Turn the keyboard upside down to let it dry before using the keyboard again.
The keyboard is defective.	Try a keyboard you know is working.

The mouse does not work.

Probable Cause	Solution
The mouse is not plugged in or connected properly.	Check the cable. Make sure it is plugged in correctly.
The mouse driver did not load when the system started.	Load the appropriate mouse driver manually or contact technical support.
The mouse is defective.	Try a mouse you know is working.

Video problems

The system is running but there is no display.

Probable Cause	Solution
The monitor is not turned on.	Make sure the monitor is plugged in and turned on. If power is applied to the monitor, the green power LED should illuminate.
The monitor's data cable is not connected.	Make sure the monitor's data cable is connected to the video controller on the back of the system.
The connector or cable is damaged.	Check the connector and cable for bent or damaged pins.
The monitor is defective.	Connect a working monitor to the computer.
The monitor's brightness and contrast controls are turned down.	Adjust the brightness and contrast knobs to the center position.
The video card is not seated correctly.	Open the system and reseat the video card.
The video card is not compatible with the system.	Make sure the card is compatible with your system. Try a different video card.

Important

Some systems do not have a video adapter card because the video controller is built into the system board, so there may not be a video adapter to remove and replace.

The text on the display is dim or difficult to read.

Probable Cause	Solution
The monitor's brightness and contrast controls are turned down.	Adjust the brightness and contrast knobs until the text becomes clear.
Sunlight is glaring off the display.	Position the monitor away from the sun or window.
The CRT may be old.	Replace the monitor.

The color monitor displays everything in black and white.

Probable Cause	Solution
The system was turned on before the monitor.	Make sure the monitor is turned on, then restart the system.
The display type is set incorrectly.	From the Control Panel window (**Start | Settings | Control Panel**), double-click **Display**, set the display to the appropriate monitor type, then restart the system.

The displayed characters are garbled.

Probable Cause	Solution
The video cable is damaged.	Check the cable and connectors for bent pins or broken wires.
The video card has failed.	Try another video card.
The display setup is incorrect.	From the Control Panel window (**Start | Settings | Control Panel**), double-click **Display** and check the settings. The correct video type should be selected, along with a supported resolution. Check your monitor and video controller documentation for details.

The video is distorted.

Probable Cause	Solution
The monitor's controls are not properly adjusted.	Adjust the monitor controls until the text becomes clear. (See your monitor documentation for more information.)
The connector or cable is damaged.	Check the connector and cable for bent or damaged pins.
The surge protector or UPS is damaged.	Disconnect the monitor power cable and connect it directly to the power source.

Probable Cause	Solution
The monitor is too close to a source of electrical interference.	Move the monitor away from sources of electrical interference, such as televisions, unshielded speakers, microwave ovens, fluorescent lights, and metal beams or shelves.
The monitor needs to be degaussed.	Turn off the computer and monitor for at least a half hour, then restart the system.

Error messages

This section lists common error messages that may be displayed on your monitor. These messages often indicate procedural errors such as an incorrect keystroke or a write-protected diskette. Some messages, however, may indicate a problem that requires you to consult the troubleshooting section of this manual.

Error Message	Solutions
Access denied.	Try saving to a new file or diskette. Move the write-protection tab over the hole on the back of the diskette.
Bad command or file name.	Make sure you entered the right command. Make sure the specified drive is correct, then try again. If you are trying to exit MS-DOS to return to Windows, type **exit**, then press ENTER.
Base memory [xxx] expansion.	This is an informational message only. No action is required.
Checking RAM on disk controller.	Your BIOS configuration is incorrect. Enter the BIOS Setup utility, then make sure of the parameter values.
CD-ROM is not recognized.	See “The CD/DVD drive is not recognized by the system.” on page 91 for possible solution.
Data error.	Run ScanDisk on the reported disk.
Decreasing available memory.	Your BIOS configuration is incorrect. Enter the BIOS Setup utility, then make sure of the parameter values.
Diskette drive is not recognized.	See “The diskette drive is not recognized by the system.” on page 96 for possible solution.
Diskette drive 0 seek to track 0 failed.	Enter the BIOS Setup utility, then make sure of the diskette drive parameters. Check the diskette drive cables. Make sure Pin 1 on the cable aligns with Pin 1 on the connector.

Error Message	Solutions
Diskette drive reset failed.	Enter the BIOS Setup utility, then make sure of the diskette drive parameters. Check the diskette drive cables. Make sure Pin 1 on the cable aligns with Pin 1 on the connector.
Diskette read failed - press F1 to retry boot.	Make sure the boot disk contains the **Command.com** file. Use the configuration utility (if applicable) to make sure of your drive or controller configuration. Press F1 to restart the computer.
Gate A20 failure.	You may have an XT keyboard connected to an AT system or vice versa. Make sure the keyboard is configured to work with the appropriate system. Some keyboards have a switch to select either AT or XT.
Hard disk controller failure.	Make sure the hard drive cable is properly connected. Open the BIOS Setup utility program, then make sure that the correct drive type is selected.
Hard disk controller failure - press F1 to try reboot.	The drive controller may be defective. Press F1 to try to restart the computer. Try running Fdisk and DOS Format. For more information, refer to your DOS documentation.
Insert bootable media device.	See “The IDE drive is not recognized by the system.” on page 93 for possible solution. See “The SCSI drive is not recognized by the system.” on page 93 possible solution. Backup your files as soon as possible.
Insufficient disk space.	Check the free space on the disk volume. If the volume is full or almost full, remove unnecessary files.
Invalid configuration information…	Enter the BIOS Setup utility, then make sure of the parameter values.

Error Message	Solutions
Invalid password.	Enter your password again, making sure to enter it correctly. If you do not know the password, you may need to reinstall the software you are trying to access. Startup passwords are stored in BIOS. If this password has been set and is unknown, you may be able to reset the password through system board jumper settings.
Keyboard clock line failure.	Try a working keyboard. Make sure the keyboard is compatible with the system. You may have to change the switch setting to AT.
Keyboard controller failure.	Try a working keyboard. Make sure the keyboard is compatible with the system. You may have to change the switch setting to AT.
Keyboard not detected.	See “The keyboard does not work.” on page 99 for possible solution. Turn off the system, then check the keyboard cable.
Keyboard stuck key failure.	Remove any objects that may be resting on the keyboard, then restart the system. Check for sticky keys. Clean the keyboard if necessary.
Memory errors were detected while the system powered up.	See “Memory errors were detected during system start up.” on page 94 for possible solution.
Memory size error.	Enter the BIOS Setup utility, then save the memory configuration.
Non-system disk or disk error.	Eject the diskette, then press ENTER. If the diskette is bootable, check it for errors.
Not enough memory.	Close all programs that are not currently in use.

Error Message	Solutions
Print queue is full.	Wait until the current print job has completed before sending another print job. If you receive this error often, you need to add memory to the printer.
Printer is out of paper.	Add paper to the printer. Make sure the printer is online.
Required parameter missing.	Make sure you entered the right command. If you are trying to exit MS-DOS to return to Windows, type **exit**, then press ENTER.
Syntax error.	Make sure you entered the right command. If you are trying to exit MS-DOS to return to Windows, type **exit**, then press ENTER.
Time and date not set.	Enter the BIOS Setup utility to set the system's date and time.
Write-protect error.	Move the write-protection tab over the hole on the back of the diskette.

Safety, Regulatory, and Notices

10

Important safety information

Your Gateway system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Warning

Always follow these instructions to help guard against personal injury and damage to your Gateway system.

Setting up your system

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Make sure you set up the system on a stable work surface.
- The product should only be operated from the type of power source indicated on the rating label.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Some products are equipped with a three-wire power cord to make sure that the product is properly grounded when in use. The plug on this cord will only fit into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate outlet.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.
- If your system is fitted with a TV Tuner, cable, or satellite receiver card, make sure that the antenna or cable system is electrically grounded to prevent against voltage surges and build up of static charges.

Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions.
- When the computer is turned off, a small amount of electrical current still flows through the computer. Always unplug all power cables and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
    - The power cord or plug is damaged.
    - Liquid has been spilled into the system.
    - The system does not operate properly when the operating instructions are followed.
    - The system was dropped or the cabinet is damaged.
    - The system performance changes.

Replacement parts and accessories

Use only replacement parts and accessories recommended by Gateway.

Important

Do not use Gateway products in areas classified as hazardous locations. Such areas include patient care areas of medical and dental facilities, oxygen-laden environments, or industrial facilities.

Regulatory compliance statements

American users

FCC Part 15

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Compliance Accessories: The accessories associated with this equipment are: shielded video cable. These accessories are required to be used in order to ensure compliance with FCC rules.

Caution

Changes or modifications not expressly approved by Gateway could void the FCC Compliance and negate your authority to operate the product.

FCC part 68 (applicable to products fitted with USA modems)

Your modem complies with Part 68 of the Federal Communications Commission (FCC) rules. On the computer or modem card is a label that contains the FCC registration number and Ringer Equivalence Number (REN) for this device. If requested, this information must be provided to the telephone company.

An FCC-compliant telephone line cord with a modular plug is required for use with this device. The modem is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices which may be connected to the telephone line. Excessive REN's on a telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

If this device causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. The telephone company may request that you disconnect the equipment until the problem is resolved.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

This equipment cannot be used on telephone company-provided coin service. Connection to party line service is subject to state tariffs. Contact the state public utility commission or public service commission for information.

When programming or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in the off-peak hours such as early morning or late evenings.

The United States Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. Refer to your fax communication software documentation for details on how to comply with the fax-branding requirement.

Canadian users

ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

DOC notice (for products fitted with an IC compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Warning

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

European users

European directives

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 89/336/EEC amending directive 92/31/EEC & 93/68/EEC as per
  - EN 50081-1:1992 according to

    EN 55022:1994 Class B

    EN 61000-3-2:1995 or EN 60555-2:1987

    EN 61000-3-3:1995 or EN 60555-3:1987
  - EN 50082-1:1992 according to

    EN 61000-4-2:1995 or IEC 801-2:1984

    EN 61000-4-3:1996 or IEC 801-3:1984

    EN 61000-4-4:1995 or IEC 801-4:1988
- Low Voltage Directive (Safety) 73/23/EEC as per EN 60950:1992(A1/A2/A3/A4/A11)

European telecommunication information (for products fitted with EU approved modems)

Marking by the symbol CE **** X indicates compliance of this equipment to the Telecom Terminal Equipment and Satellite Earth Stations Directive 98/13/EEC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 (1998) - Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi Frequency (DTMF) signaling.

Warning

Although this equipment can use either loop disconnect (Pulse) or DTMF (Tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC—"CTR 21" for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact Gateway customer support.

Japanese users

VCCI statement

This equipment is in the Class B category (Information Technology Equipment to be used in a residential area or an adjacent area thereto) and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment aimed at preventing radio interference in such residential areas. When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling.

電波障害について
　この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
　取扱説明書に従って正しい取り扱いをして下さい。

Australia and New Zealand users

EMI statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Australian Communications Authority and Radio Spectrum Management Agency.

New Zealand telecommunication statement (for products fitted with Telepermit approved modems)

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment shall not be set up to make automatic calls to the Telecom '111' Emergency Service.

Important

Under power failure conditions, this telephone may not operate. Make sure that a separate telephone, not dependent on local power, is available for emergency use.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's specifications:

(a) There shall be no more than 10 calls to the same number within any 30-minute period for any single manual call initiation, and

(b) The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

The equipment shall be set to make sure that automatic calls to different numbers are spaced such that there is no less than 5 seconds between the end of one call attempt and the beginning of another.

The equipment shall be set to make sure that calls are answered between 3 and 30 seconds of receipt of ringing.

Laser safety statement

All Gateway systems equipped with CD and DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing contact an authorized service location.

Warning

Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

Television antenna connectors protection (for systems fitted with TV/cable TV tuner cards)

External television antenna grounding

If an outside antenna or cable system is to be connected to your Gateway PC, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and built up static charges.

Article 810 of the National Electrical Code, ANSI/NFPSA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Lightning protection

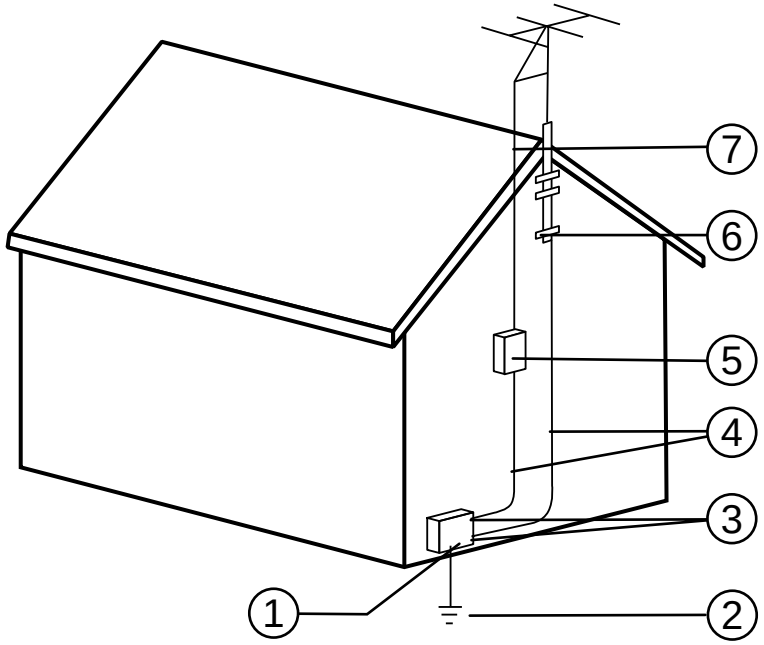
For added protection of any Gateway product during a lightning storm or when it is left unattended or unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system.

Power lines

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power lines or circuits. When installing or re-aligning an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits. Contact with them could be fatal.

Warning

When installing or realigning an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits. Contact with them could be fatal.



Antenna and satellite grounding

Reference	Grounding component
1	Electric service equipment
2	Power service grounding electrode system (NEC Art 250, Part H)
3	Ground clamps
4	Grounding conductors (NEC Section 810-21)
5	Antenna discharge unit (NEC Section 810-20)
6	Ground clamp
7	Antenna lead-in wire

Notices

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San Diego, CA 92121 USA

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Specifications

A

The following specifications are for the standard configuration; your system may contain optional equipment. All specifications are subject to change.

Mid Tower case size	8.2 in. (20.828 cm) x 17.8 in. (45.212 cm) x 19 in. (48.26 cm) (W x D x H).
Processor	Intel® Celeron™ and Pentium III™ (FC-PGA 370) processors.
RAM capacity	Two DIMM sockets on the system board support 3.3 volt Synchronous Dynamic Random Access Memory (SDRAM) DIMMs. Maximum memory is 512 MB.
BIOS	AMI BIOS: Flash BIOS for easy updates from diskette.
IDE interfaces	Supports up to four IDE devices (hard drives, CD-ROMs, LS-120s) using two onboard PCI IDE adapters.
Diskette drive	A diskette controller is integrated on the system board. Support available for primary and secondary diskette drives or a tape backup unit (TBU).
I/O ports	One parallel port, two serial ports, two USB ports, one PS/2 keyboard port, one PS/2 mouse port, one video port, one audio microphone-in jack, one audio line-in jack, one audio line-out jack, one RJ-45 network jack. LPT and COM configurable from system setup program. No jumper settings are required.
AGP Expansion Slot	One slot (dedicated graphics/video).
PCI Expansion Slots	Five PCI slots.
Power Supply	200 watts. ATX power connector for easy power cable changeover.

System environment	Internal temperature: 10°C to 35°C Humidity: 20% to 80% Altitude: -200 ft. to 10,000 ft. Shock/vibration: 12g, 11ms half-sine; 2 to 200Hz, 0.25g sinusoidal CPU clearance: >0.4 inch after installation, top and sides
Certification	FCC Class B, UL, CUL, CE Mark, VCCI, CB Scheme.

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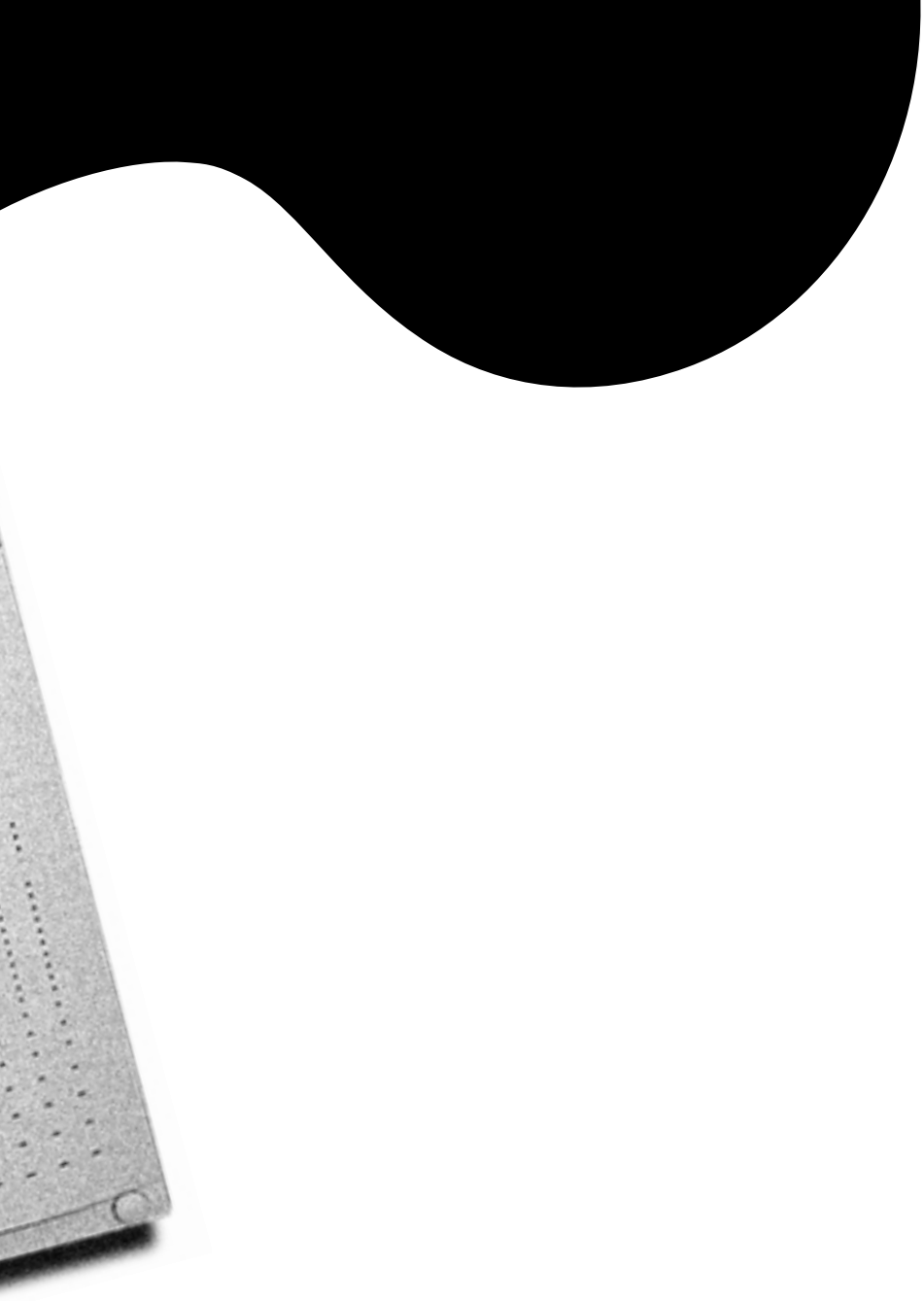

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